

Mountain Lion Sightings While Deer Hunting

Survey Response Analysis

September 28, 2004

License Year 2003

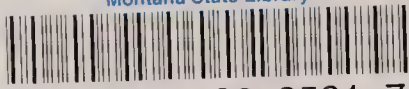
Harvest Surveys

Montana Fish Wildlife and Parks

Table of Contents

Introduction	1
Tables of Expanded Statistical Estimates	9
1. Statewide Overview of Montana Resident Deer Hunters and Harvest, and Lion Observers	11
2. Deer Hunting Effort and Lion Observations	13
3. Statistical Confidence and Relative Precision.....	21
4. Additional Lion Observation Statistics	29
Appendix A: 2003 Mountain Lion Management Areas, Regulations/Quota Units, and Hunting Districts	37
Appendix B: 2003 Mountain Lion Sightings Survey Response Data Non-Expanded Summary Statistics	43
Appendix C: 2003 Mountain Lion Sightings Statistical Estimates Data File Description	51
Enclosures	
2003 Deer Hunting and Harvest Survey Questionnaire	
2003 Mountain Lion Sighting Survey Questionnaire	

Montana State Library



3 0864 1006 9501 7

Introduction

This report contains an analysis and summary of information returned from a supplemental survey of license year 2003 (LY2003) Montana resident deer survey respondents contacted by phone and reporting active hunting for deer. These respondents were asked if they sighted mountain lions while deer hunting and, if so, the number observed in deer Districts hunted. The **Mountain Lion Sighting Survey** specifically requested only those mountain lions observed while actively hunting deer. Each sighting was linked to a specific deer hunter expending a specific number of hunter days in a specific deer District. Thus mountain lion observations could be directly related to deer hunting effort and analyzed as an extension of the LY2003 deer hunter response data analysis.

Estimates of the number of **deer hunters**, number of **hunter days** devoted to deer hunting, number of hunters which were also **lion observers**, and number of **lions sighted** while deer hunting are presented at five different **levels of Location: Statewide, Regional, Lion Management Area, Lion Regulations/Quota Unit, and Hunting District**. (See **Appendix A** for a listing defining the Areas and Units in terms of Hunting Districts.) **Confidence bounds** at the 80% significance level are given for these estimates along with a measure of **relative precision**, as are various meaningful **ratios** of statistics based on these estimates.

As mentioned above, the analysis of Mountain Lion Sighting Survey response data is closely tied to the analysis of Deer Survey response data. This supplemental survey allowed reporting the "Number of Lions Sighted" for each "Deer District–Hunter Days" entry reported on the Deer Survey. (See the **Deer Survey** and the **Mountain Lion Sighting Survey Questionnaire** enclosures.) **The Mountain Lion Sighting Survey was asked of Montana resident deer survey respondents contacted by phone and reporting active hunting for deer.** Information on number of lion observers and lions sighted was directly linked to the deer hunting response data set for this subset of resident deer survey respondents. **Summary statistics from sighting survey responses were expanded to statistical estimates using the Montana resident deer hunter expansion factor, 2.838.** (See the **2003 Deer Hunting Report – Introduction** for the derivation of this expansion factor, and an overview of deer survey response data analysis.) Though the resident deer hunting expansion factor was used throughout this report, **the resident deer respondent subset analyzed was slightly reduced from that used in the Deer Hunting Report.** A small percentage (1.73%) of resident deer survey respondents were contacted by mail. These were not surveyed for lion sighting information, and were excluded from lion sighting analysis. Throughout this report, estimates of deer hunters and effort will be slightly lower than the estimates presented in the Deer Hunting Report. **The underlying population of potential mountain lion observers considered here is the population of resident active deer hunters with home phones.**

Table 1: Statewide Overview of Deer Hunters and Harvest, and Lion Observers

Table 1 presents overall Statewide estimates based on responses to the most basic questions on the deer hunting/harvest and mountain lion sighting survey response forms:

- **Did you hunt deer?**
- **If you hunted for deer, how many deer did you kill?**
- **If you hunted for deer, did you see one or more Mountain Lions while hunting for deer?**

Statewide estimates of Deer Hunters, Successful Hunters, Deer Harvest, and Lion Observers are presented, along with upper and lower 80% confidence bounds, plus meaningful ratios based on these statistics. **Two differing views are presented.**

The first view provides statewide estimates, plus estimates by Conservation Item of the sportsperson. This is meant to provide information on differences in mountain lion observation reports due to the type of conservation license a sportsperson holds. The following statistics are presented by Conservation Item:

- **Deer Hunters:** Point estimate of number of active MT resident deer hunters.
- **Hunters Low Bnd:** Lower bound 80% confidence bound on hunters.
- **Hunters Up Bnd:** Upper bound 80% confidence bound on hunters.
- **Success Hunters:** Point estimate of number of successful MT deer hunters.
- **S Hunter Low Bnd:** Lower bound 80% confidence bound on successful hunters.
- **S Hunter Up Bnd:** Upper bound 80% confidence bound on successful hunters.
- **Deer Harvest:** Point estimate of number of deer harvested by successful hunters.
- **Harvest Low Bnd:** Lower bound 80% confidence bound on harvest.
- **Harvest Up Bnd:** Upper bound 80% confidence bound on harvest.
- **Percent Success:** Ratio of successful hunters to active hunters. An estimate of percent of deer hunters who were successful.
- **Kill Per Hunter:** Ratio of harvest to active hunters. An estimate of the number of deer killed per active hunter.
- **Mtn Lion Observers:** Point estimate of number of deer hunters observing one or more mountain lions while deer hunting. Lion Observers.
- **Observers Low Bnd:** Lower bound 80% confidence bound on lion observers.
- **Observers Up Bnd:** Upper bound 80% confidence bound on lion observers.
- **Pcnt Lion Observers:** Ratio of observers to hunters. An estimate of the percent of active MT resident deer hunters who were also lion observers.

The second view provides statewide estimates, estimates by Conservation Item of the sportsperson, and estimates by success of the deer hunter. This is meant to provide information on differences in mountain lion observation reports due to whether the hunter succeeded in killing one or more deer. The following statistical estimates are presented by Conservation Item and Hunter Success: Deer Hunters, Hunters Low Bnd, Hunters Up Bnd, Mtn Lion Observers, Observers Low Bnd, Observers Up Bnd, Pcnt Lion Observers. Statistics are defined as above.

Since LY2002 conservation licenses have been issued over the counter via the FWP Automated Licensing System (ALS). All licenses issued through ALS are identified by a 7 digit Item Type. For conservation licenses, this code replaced the old 2 digit Conservation Prefix codes used up to LY2001. However, while the method identifying each conservation license changed, the types issued remained basically the same. Therefore, these two tables remain comparable to those previously presented in LY2001 and LY2000, which gave the same information by Conservation Prefix. The presence of 6 resident deer hunters holding nonresident combo conservation licenses is due to rare inconsistencies in ALS stemming from the way N combo applications are entered into ALS, and because residency of the holder may change during the license year.

The estimate of the population of statewide resident active deer hunters considered to be potential lion observers is 127,100 (± 620 80% C.I., $\pm 0.49\%$ Relative Precision). Of these, 67% were successful, and they harvested an estimated 118,810 deer (± 600 , $\pm 0.50\%$). Of this total population of active resident deer hunters, an estimated 1.77% observed one or more lions while deer hunting, for an estimate of 2,251 (± 83 , $\pm 3.66\%$) resident deer hunters observing mountain lions while deer hunting. Percent Lion Observers was highest for "Resident Sportsman with Bear - 20-02-010" and "Flathead Use Conservation - 20-01-074" holders (3.79%, 3.18%). Of the items with significant deer hunter populations it was lowest for "Sportsman Youth- 20-02-111" and "Sportsman Landowner- 20-02-011" (0.81%, 1.19%). The overall percent reporting lion observations was somewhat higher for unsuccessful resident deer hunters as compared to successful hunters (1.81 vs 1.75%).

The estimated population of resident active deer hunters (potential lion observers) was 2.2% higher in 2003 as compared to 2002, which was about 5.9% higher than in 2001 and 2000 (127,100 vs

124,424 vs 117,526 vs 117,436). Estimated deer harvest was 17.9% higher in 2003 than in 2002, which was 11% higher than 2001 and about 7% higher than 2000 (118,810 vs 100,799 vs 90,451 vs 94,334). Though deer hunters and harvest were at 4 year maximums in 2003, the estimated number of lion observers was the lowest of the 4 years (2,251 vs 2,332 vs 2,273 vs 3,078). The 2003 percent of the population of deer hunters observing lions continued a 4 year decline (1.77% vs 1.87% vs 1.93% vs 2.62%).

Table 2: Deer Hunting Effort and Lion Observations

Table 2 presents estimates based on responses to the following questions on the deer hunting/harvest and mountain lion sighting survey response forms:

- **If you hunted for deer, list the Days Hunted by Deer District?**
- **If you hunted for deer, did you see one or more Mountain Lions while hunting for deer?**
- **If you saw one or more Mountain Lions while hunting for deer, list the number seen by Deer District (as listed above).**

Estimates of Montana resident Deer Hunters, Districts Hunted, Hunter Days, Lion Observers, and Lions Seen are presented, along with meaningful ratios based on these statistics which relate lion observations to deer hunting effort. These estimates are presented at 5 different levels of Location: Statewide, Regional, Lion Management Area, Lion Regulations/Quota Unit, and the Deer Hunting District (same as Lion District). See **Appendix A** for the Districts included in each Management Area and Regs/Quota Unit. **The following statistics are presented by Location:**

- **Deer Hunters:** Point estimate of number of active MT resident deer hunters.
- **Districts Hunted:** Point estimate of number of Districts hunted by deer hunters. This is presented only at the State and Regional levels.
- **Hunter Days:** Point estimate of number of days or parts of days spent hunting by deer hunters.
- **Distric/Hunter:** Ratio of Districts Hunted to Hunters. An estimate of the average number of Districts hunted by a deer Hunter. This is presented only at the State and Regional levels.
- **Days/Hunter:** Ratio of Hunter Days to Hunters. An estimate of the average number of days spent deer hunting by a deer hunter.
- **Days/Distric:** Ratio of Hunter Days to Districts. An estimate of the average number of days spent hunting in a District by a deer hunter. This is presented only at the State and Regional levels.
- **Hunter Observ:** Point estimate of number of deer hunters observing one or more mountain lions while deer hunting. Lion Observers.
- **Distric Observ:** Point estimate of number of deer Districts where lions were observed by deer hunters. This is presented only at the State and Regional levels. Lion Observation Districts.
- **Observ Days:** Point estimate of number of days spent hunting by deer hunters in Districts where lions were observed. Observation Days.
- **Lions Seen:** Point estimate of number of lions seen by deer hunters while deer hunting.
- **Percent Observ:** Ratio of observers to hunters. An estimate of percent of deer hunters who were also lion observers.
- **Distric/Observ:** Ratio of Districts Hunted to Lion Observers. The expected number of Districts a deer Hunter needs to hunt deer to observe a mountain lion. This is presented only at the State and Regional levels.
- **Days/Observ:** Ratio of Hunter Days to Lion Observers. The expected number of days a deer hunter needs to hunt deer to observe a mountain lion.
- **Hunters/Lion:** Ratio of deer Hunters to Lions Seen. The expected number of active deer hunters needed in the field to observe one mountain lion.

- **Days/Lion:** Ratio of Hunter Days to Lions Seen. The expected number of days a deer hunter needs to hunt deer to observe one mountain lion.
- **District/Lion:** Ratio of Districts Hunted to Lions Seen. The expected number of Districts a deer Hunter needs to hunt deer to observe one mountain lion. This is presented only at the State and Regional levels.
- **Lions/Observer:** Ratio of Lions Seen to Lion Observers. An estimate of the average number of lions seen by a lion observer hunting for deer.

The ratios of statistical estimates presented in Table 2 provide standardized information regarding deer hunter effort, and how this effort relates to mountain lions observed.

Districts/Hunter and Days/Hunter provide measures of deer hunting effort, standardized to the estimated number of deer hunters. These ratios provide more comparable measures of deer hunter effort over time, and between Locations, than do the underlying estimates themselves. For example, by Region during 2003, resident deer hunters expended most effort hunting deer in Region 2, and least in Region 5 (8.35 vs 4.48 days/hunter).

Percent Observers (Lion Observers/Deer Hunters) is the likelihood a deer hunter will see one or more lions while deer hunting. It could be used as an indicator of lion observability over time and between Locations. For example, by Region during 2003, resident deer hunters were most likely to see one or more lions in Region 2, and least likely in Region 6 (2.86% vs 0.17%). Lion Management Areas with the highest Percent Observers were R2-Lower Clark Fork (M2A, 4.0%) and R1-Cabinet-Yaak (M1A, 3.4%). Hunting Districts with highest Percent Observers were 361, 202, and 455, at 6.3%, 5.1%, and 4.9% respectively.

Hunters/Lion is a similar measure of lion observability, standardized to the number of deer hunters. Instead of using number of lion observers, it uses number of lions seen. For example, by Region, it took the fewest number of deer hunters to see a lion in Region 2, and the most in Region 6 (22.8 vs 530 hunters/lion seen). Hunters/Lion may provide a finer measure of lion observability between Locations or over time, as compared to Percent Observers, but it may also be more subject to survey response bias. (The number of respondents reporting they saw lion(s) by District may be more accurate and more stable over time than the number of individual lions reported seen in each District.)

Other possible indicators of mountain lion observability comparable over time and between locations include **Days/Observation** and **Days/Lion**. Here Lion Observers and Lions Seen are standardized to deer Hunter Days. Hunter days may be a more comparable measure of deer hunter effort than deer hunters, thus it may more directly standardize lion observability to deer hunting effort, and provide a more useful indicator of lion observability by Location and a more direct indicator of trends over time. For example, by Region, it requires the least number of deer Hunter Days to observe one or more lions in Region 2, and the most in Region 6 (292 vs 3264 days/observer). It requires the least number of deer Hunter Days to see one lion in Region 2, and the most in Region 6 (190 vs 2856 days/lion). The Lion Management Areas with the lowest deer hunter days per lion observation were R2-Lower Clark Fork (M2A, 104) and R1-Whitefish (M1E, 143).

Statewide in 2003, the number of days required for the average active deer hunter to see one or more lions while hunting deer continued the increasing trend since 2000 (395 vs 377 vs 353 vs 263 days). The number of hunter days per lion seen continued to increase as well (268 vs 240 vs 232 vs 173 days). These indicators, and the continued decline in percent of deer hunters observing one or more lions (1.77 vs 1.87 vs 1.93 vs 2.62%), suggest it has become more difficult to observe lions while deer hunting over this 4 year period.

The ratio **Lions/Observer**, which standardizes lions seen to lion observers, may or may not be useful as a comparable indicator of lion observability, but it may prove useful in tracking lion sighting survey response characteristics over time. This indicator decreased in 2003, as compared to license years 2002, 2001, and 2000 (1.48 vs 1.57 vs 1.52 vs 1.53).

Table 3: Statistical Confidence and Relative Precision

Table 3 presents measures of statistical confidence for the key estimates given in **Table 2**. Estimates of Montana resident Deer Hunters, Lion Observers, and Lions Seen are presented, along with Lower and Upper 80% Confidence Bounds, and Percent Relative Precision. As in **Table 2**, these estimates are presented at 5 different levels of Location: Statewide, Regional, Lion Management Area, Lion Regulations/Quota Unit, and the Deer Hunting District. (See **Appendix A.**) **The following statistics are presented by Location:**

- **Deer Hunters:** Point estimate of number of active MT resident deer hunters.
- **Hunters Low Bnd:** Lower bound 80% confidence bound on hunters.
- **Hunters Up Bnd:** Upper bound 80% confidence bound on hunters.
- **Hunter % RPrec:** Percent by which the upper 80% Confidence Bound differs from the point estimate for active MT resident deer hunters.
- **Hunter Observ:** Point estimate of number of deer hunters observing one or more mountain lions while deer hunting. Lion Observers.
- **Observ Low Bnd:** Lower bound 80% confidence bound on lion observers.
- **Observ Up Bnd:** Upper bound 80% confidence bound on lion observers.
- **Observ % RPrec:** Percent by which the upper 80% Confidence Bound differs from the point estimate for lion observers.
- **Lions Seen:** Point estimate of number of lions seen by deer hunters while deer hunting.
- **Lions Low Bnd:** Lower bound 80% confidence bound on lions seen.
- **Lions Up Bnd:** Upper bound 80% confidence bound on lions seen.
- **Lions % RPrec:** Percent by which the upper 80% Confidence Bound differs from the point estimate for lions seen.

Confidence bounds and percent relative precision are indicators of the statistical variability of an estimate. The wider the confidence bound relative to the value of the estimate, the higher the variability (uncertainty) in the estimate, and the lower our confidence the estimate comes close to the true value of the statistic. Percent relative precision presents the concept of variability (uncertainty) in a form that is comparable for differing measures of the same statistic. It standardizes the width of the confidence bound by comparing it to the value of the estimate. The lower the value of percent relative precision for an estimate, the lower the variability (uncertainty) in the estimate, and the greater our confidence the estimate comes close to the true value of the statistic.

Relative precision of a hunter survey estimate depends on the expansion factor used to expand the underlying survey response summary count into a statistical point estimate, and the size of the underlying survey response summary count. The expansion factor is basically the inverse of the response rate ("Number of Resident Deer License Holders" divided by "Number of Resident Deer License Holders Responding to the Deer Survey"). A low expansion factor (close to 1) indicates a high response rate, and relatively good statistical precision (low variability, low uncertainty) in the estimate, relative to a high expansion factor. The second factor influencing precision of a survey based estimate is the magnitude of the sum of raw survey responses to a question, such as "Did you Hunt?" (Hunter estimate), "How many Days? (Hunter Days estimate), "Did you see Lion(s)" (Lion Observer estimate), and "How many Lions did you see?" (Lions Seen estimate). Larger raw response tallies indicating hunting or lion observations result in relatively good statistical precision (low variability, low uncertainty) in the expanded estimate, relative to smaller raw response tallies. As responses are lumped into larger groupings, such as grouping responses by Hunting District into responses by Management Area, the underlying raw response tallies increase, therefore statistical precision in the expanded estimate improves (variability decreases).

The **LY2003 Deer Hunting Report** resident expansion factor (**2.838**) was used to estimate values of all the statistics in this report at all levels and values of Location. Thus, precision of estimates of deer hunting and lion sighting statistics will differ only according to the raw response tallies of the surveys returned from each Location. Estimates for hunting Districts popular with deer hunters will be more

precise (better) than those from Districts less frequented. Sighting estimates from Districts where lions are more commonly observed will tend to be more precise (better) than those from Districts where lions are less common. This holds true for the higher levels of Location as well. Estimates at the higher levels of Location, which lump the survey responses into larger and larger groupings, will have better precision the more the responses are lumped together.

Table 3 illustrates the differences in Percent Relative Precision between different areas within the same level of Location, and differences between the different levels of Location. At the Hunting District level, average relative precision for estimates of Deer Hunters, Lion Observers, and Lions Seen were 6.9%, 57.0%, and 50.9%, respectively, over the 133 Districts where lions were reported. The estimates of active deer hunters have much better relative precision than the lion sighting estimates because few deer hunters observe lions (an average of 1.77%), thus the raw tally of lion observer responses is very low compared to active deer hunter responses (**Appendix B**). Districts with the best relative precision in the estimate of Lion Observers are 100 (18.0%) and 202 (19.9%).

At the Lion Regulations/Quota Unit level of Location, average relative precision for the estimate of Lion Observers is 40.9% over the 71 Units where lions were reported. The 3 Regs/Quota Units with the best relative precision were R202 (15.9%), R700 (17.2%), and R100 (18.0%). Even though lion observability is low in the R700 Unit (% Observers=0.70%), the estimate of Lion Observers (102) has a good relative precision compared to other Units because it includes all of Region 7, a large area popular with deer hunters, and thus lumps together a large number of responding active hunters (5,170) compared to other Units, which are generally much smaller groupings of Districts with fewer respondents.

At the Lion Management Area level of Location, average relative precision for the estimate of Lion Observers was 32.7% over the 26 areas where lions were reported. The 3 Management Areas with the best relative precision were R1-Salish (M1C, 11.0%), R2-Blackfoot (M2D, 12.0%), and R4-Mountain Foothills (M4B, 12.0%).

At the Regional level of Location, average relative precision for the estimate of Lion Observers is 25.6% over the 8 Regions where lions were reported. Region 2 and 1 had the best relative precision in the estimate (7.0% and 7.4%), while Region 6 had the worst of the Regions (39.0%). Relative precision in the Statewide estimate of Lion Observers is 3.7%. Confidence in the Statewide estimate of lion observers declined slightly in 2003. Percent relative precision was $\pm 3.66\%$ of the value of the estimate, compared to $\pm 3.63\%$ in 2002, $\pm 3.56\%$ in 2001, and $\pm 3.21\%$ in 2000. This reflects the overall decline in numbers of resident active deer survey respondents reporting lion observations.

The precision of estimates will ultimately dictate how useful this survey of lion sightings by deer hunters will be as a trend indicator for lion density over time. Variability in the estimates must be low enough to permit detection of real underlying trends in lion density over time, at levels of Location which represent areas which are meaningful to lion management. Ratios of lion observation statistics to deer hunting effort statistics (see Table 2 description above) may prove more stable and more directly reflective of lion densities in a given area over time than stand alone estimates of total Lion Observers or total Lions Seen.

Table 4: Additional Lion Observation Statistics

Table 4 presents additional estimates and ratios of estimates based on responses to questions on the deer hunting/harvest and mountain lion sighting survey response forms. Estimates of MT resident Deer Hunters, Lion Observers, Lion Observation Districts, Lion Observation Days, and Lions Seen are presented, along with meaningful ratios of lion observation statistics. The additional statistics presented here may prove of some value in helping detect trends in lion densities, or trends in survey response characteristics, over time. These estimates are presented at 5 different levels of Location: Statewide, Regional, Lion Management Area, Lion Regulations/Quota Unit, and the Deer Hunting District.

The following statistics are presented by Location:

- **Deer Hunters:** Point estimate of number of active MT resident deer hunters.
- **Hunter Observ:** Point estimate of number of deer hunters observing one or more mountain lions while deer hunting. Lion Observers.
- **District Observ:** Point estimate of number of deer Districts where lions were observed by deer hunters. This is presented only at the State and Regional levels. Lion Observation Districts.
- **Observ Days:** Point estimate of number of days spent hunting by deer hunters in Districts where lions were observed. Observation Days.
- **Lions Seen:** Point estimate of number of lions seen by deer hunters while deer hunting.
- **Percent Observ:** Ratio of observers to hunters. An estimate of percent of deer hunters who were also lion observers.
- **Lions/Observ:** Ratio of Lions Seen to Lion Observers. An estimate of the average number of lions seen by a lion observer hunting for deer.
- **ObsDist/Observ:** Ratio of Lion Observation Districts to Lion Observers. The average number of Districts in which a Lion Observer see lions. This is presented only at the State and Regional levels.
- **ObsDays/Observ:** Ratio of Observer Days to Lion Observers. The average number of observation days a lion observer needs to observe mountain lions.
- **ObsDays/ObsDist:** Ratio of Observer Days to Observation Districts. The average number of observation days a spent hunting in Districts where lions were observed.
- **Lions/ObsDay:** Ratio of Lions Seen to Observer Days. An estimate of the average number of lions seen per observation day.
- **Lions/ObsDist:** Ratio of Lion Seen to Lion Observation Districts. The average number of lions seen per lion observation District. This is presented only at the State and Regional levels.

Appendix A: Lion Mgmt Areas, Regs/Quota Units, and Districts

Appendix A presents Lion Hunting Districts (same as Deer Districts) sorted by Region and Management Area. Descriptive names of Management Areas are given. Lion Regulation/Quota Units are also defined. This table shows which Districts are grouped into the higher levels of Location, as used in this report.

Deer/Lion Districts in LY2003 were the same as in LY2002. However, **there were two changes in Deer/Lion Districts in LY2003/LY2002, as compared to LY2001/LY2000. District 623 was dropped** and the area was incorporated into existing District 621. Statistics computed at the Management Area (M6A) or Regulations Unit (R600) levels of Location are unaffected by this change. **District 109 was added.** It was split off from District 101. New District 109 was assigned to the Management Area of 101, M1C=Salish, and the Regulations Unit of 101, R101=HD:101,109.

Appendix B: Non-expanded Response Summary Statistics

Appendix B presents the non-expanded raw summary tallies of the linked Deer Hunter and Lion Sighting Survey responses. Tallies of responding Deer Hunters and Lion Observers are listed, along with sums of reported Districts Hunted, Hunter Days, Observation Districts, Observation Days, and Lions Seen. The ratio Percent Observers is also given. These raw response statistics are presented at 5 different levels of Location: Statewide, Regional, Lion Management Area, Lion Regulations/Quota Unit, and the Deer Hunting District.

The following statistics are presented by Location:

- **Responding Hunters:** Number of MT resident deer survey respondents reporting active hunting.
- **District Hunted:** Sum of Districts hunted for active MT resident deer survey respondents.
- **Hunter Days:** Sum of hunter days for active MT resident deer survey respondents.
- **Hunter Observ:** Number of active MT resident deer survey respondents reporting the sighting of one or more mountain lions while deer hunting. Respondent Lion Observers.
- **District Observ:** Sum of Districts reported where lions were observed by active MT resident deer survey respondents.
- **Observ Days:** Sum of hunter days reported where lions were observed by active MT resident deer survey respondents.
- **Lions Seen:** Sum of reported lions seen by active MT resident deer survey respondents.
- **Percent Observ:** Ratio of Responding Active Hunters to Respondent Lion Observers. An estimate of percent of deer hunters who were also lion observers.

Note that all the ratios of mountain lion sighting and deer hunting effort estimates provided in **Tables 2 and 4** can be computed from the underlying response summary statistics given in **Appendix B**. They remain the same whether computed from the underlying raw tallies and sums, or the expanded statistical estimates. Ratios of non-expanded summary statistics estimate true values of meaningful population statistics. Thus, it is not necessary to expand the survey response summary statistics to obtain potentially meaningful indicators of mountain lion density.

Appendix C: Statistical Estimates Data File Description

Appendix C presents a description of a data file of expanded estimates of “Mountain Lion Sighting while Deer Hunting” survey statistics. This data set contains all the estimates used to generate **Tables 2, 3, and 4**. It is available in compressed form for electronic distribution. It can be imported into a variety of data handling software. For example, this data set can be imported into a spreadsheet and sorted, selected, and formatted as desired for tabular or graphical presentation.

Notes Applying to Mountain Lion Sightings Tables

- **Undefined, missing, or not applicable values are flagged in the database and presented in the report as –9.9.** Undefined ratios and percents occur when the denominator of a ratio is zero. This occurs when the response data indicated no lion observations at a particular location.
- **The page numbers** in the lower right hand corner of each page indicate the consecutive page number in the report. The page numbers in the upper right of each table title header indicate a page within a given table. Each table will have numbered consecutive pages.
- **The date September 28, 2004** printed in the table title headers and throughout this report indicates the date the presented estimates of LY2003 mountain lion sighting statistics were generated. This provides a version stamp in the event the statistics are regenerated at a later date using altered source data or modified analysis techniques.

**2003
Mountain Lion Sightings
While Deer Hunting**

**Tables of Expanded
Statistical Estimates**

**Table 1
Statewide Overview of Montana Resident
Deer Hunters and Harvest, and Lion Observers**

**Table 2
Deer Hunting Effort and Lion Observations**

**Table 3
Statistical Confidence and Relative Precision**

**Table 4
Additional Lion Observation Statistics**

Tables 2, 3, and 4 presented by Location as follows:

**Statewide and Regional
By Lion Management Area
By Lion Regulations/Quota Unit
By Hunting District**

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Statewide Deer Hunters and Harvest, and Lion Observers
By Conservation Item of Hunter

Conservation License Name	Cons Item	Deer Hunters	Hunters Low Bnd	Success S Hunter Up Bnd	Success S Hunter Low Bnd	Deer Harvest Up Bnd	Deer Harvest Low Bnd	Harvest Up Bnd	Harvest Low Bnd	Harvest Percent Success	Kill Per Hunter	Lion Observers Low Bnd	Lion Observers Up Bnd	Pcnt Lion Observers
All MT Residents ALL	ALL	127,100	126,480	127,720	85,616	85,107	86,125	118,810	118,210	67.4	0.935	2,251	2,333	1.77
Conservation	2001001	40,142	39,793	40,490	26,532	26,249	26,815	34,865	34,541	66.1	0.869	588	630	1.46
Flathead Use	2001074	2,234	2,152	2,316	1,388	1,323	1,453	1,936	1,859	62.1	0.867	71	86	3.18
Flathead Disable	2001081	43	31	54	23	14	31	28	19	53.3	0.667	0	0	0.00
Cons w/ Fishing	2002001	49,045	48,660	49,430	33,108	32,792	33,425	45,960	45,587	67.5	0.937	744	791	1.52
NCombo BGame Gen	2002003	6	2	10	3	0	6	3	0	50.0	0.500	0	0	0.00
RSports w/ Bear	2002010	11,614	11,427	11,802	8,475	8,315	8,635	13,465	13,263	73.0	1.159	440	476	3.79
RSports Gen	2002012	20,041	19,795	20,287	13,587	13,384	13,789	19,541	19,298	67.8	0.975	375	408	1.87
RSports LO	2002011	477	439	515	261	233	289	312	281	54.8	0.655	6	10	1.19
RSports Yth	2002111	3,500	3,397	3,602	2,239	2,157	2,322	2,699	2,609	64.0	0.771	28	38	0.81

Statewide Deer Hunters and Lion Observers
By Conservation Item and Success of Hunter

Conservation License Name	Cons Item	Killed a Deer	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Mtn Observers Up Bnd	Lion Observers Low Bnd	Lion Observers Up Bnd	Observers Low Bnd	Observers Up Bnd	Pcnt Lion Observers
All MT Residents ALL	ALL	All	127,100	126,480	127,720	2,251	2,168	2,333	1.77		1.77
	No	No	41,484	41,130	41,838	749	702	797	1.81		1.81
	Yes	Yes	85,616	85,107	86,125	1,501	1,434	1,569	1.75		1.75
Conservation	2001001	All	40,142	39,793	40,490	588	545	630	1.46		1.46
	No	No	13,609	13,407	13,812	207	182	232	1.52		1.52
	Yes	Yes	26,532	26,249	26,815	380	346	414	1.43		1.43
Flathead Use	2001074	All	2,234	2,152	2,316	71	56	86	3.18		3.18
	No	No	846	795	896	26	17	34	3.02		3.02
	Yes	Yes	1,388	1,323	1,453	45	34	57	3.27		3.27
Flathead Disable	2001081	All	43	31	54	0	0	0	0.00		0.00
	No	No	20	12	28	0	0	0	0.00		0.00
	Yes	Yes	23	14	31	0	0	0	0.00		0.00
Cons w/ Fishing	2002001	All	49,045	48,660	49,430	744	696	791	1.52		1.52
	No	No	15,937	15,717	16,156	247	220	274	1.55		1.55
	Yes	Yes	33,108	32,792	33,425	497	458	535	1.50		1.50
NCombo BGame Gen	2002003	All	6	2	10	0	0	0	0.00		0.00
	No	No	3	0	6	0	0	0	0.00		0.00
	Yes	Yes	3	0	6	0	0	0	0.00		0.00
RSports w/ Bear	2002010	All	11,614	11,427	11,802	440	403	476	3.79		3.79
	No	No	3,139	3,042	3,237	105	87	123	3.35		3.35
	Yes	Yes	8,475	8,315	8,635	335	303	367	3.95		3.95
RSports Gen	2002012	All	20,041	19,795	20,287	375	341	408	1.87		1.87
	No	No	6,454	6,315	6,594	159	137	181	2.46		2.46
	Yes	Yes	13,587	13,384	13,789	216	190	241	1.59		1.59
RSports LO	2002011	All	477	439	515	6	2	10	1.19		1.19
	No	No	216	190	241	0	0	0	0.00		0.00
	Yes	Yes	261	233	289	6	2	10	2.17		2.17
RSports Yth	2002111	All	3,500	3,397	3,602	28	19	38	0.81		0.81
	No	No	1,260	1,198	1,322	6	2	10	0.45		0.45
	Yes	Yes	2,239	2,157	2,322	23	14	31	1.01		1.01

TABLE 2: DEER HUNTING EFFORT AND LION OBSERVATIONS

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Deer Hunting Effort and Lion Observations
By Lion Management Area

Location	Lion Mgmt Area Name	Deer Hunters	Hunter Days	Days/ Hunter	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Days/ Observ	Hunters /Lion	Days /Lion	Lions/ Observ
M1A	CABINET-YAAK	3,627	28,641	7.90	125	1,351	199	3.44	229.34	18.26	144.16	1.59
M1B	CLARK FORK	2,705	23,529	8.70	82	874	125	3.04	285.86	21.66	188.41	1.52
M1C	SALISH	11,345	76,747	6.77	250	2,146	366	2.20	307.27	30.98	209.61	1.47
M1D	BOB MARSHALL-MISSIONS	3,996	23,541	5.89	68	596	108	1.70	345.58	37.05	218.26	1.58
M1E	WHITEFISH	1,490	8,117	5.45	43	360	57	2.86	190.67	26.25	143.00	1.33
M1F	URBAN	968	5,648	5.84	9	77	11	0.88	663.33	85.25	497.50	1.33
M1U	REGION 1 UNKNOWN	65	468	7.17	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
M2A	LOWER CLARK FORK	4,561	33,060	7.25	182	1,584	318	3.98	182.00	14.35	104.00	1.75
M2B	BITTERROOT	8,081	69,007	8.54	159	1,811	233	1.97	434.16	34.72	296.50	1.46
M2C	ROCK CR-DEERLODGE	3,571	26,583	7.45	71	718	105	1.99	374.64	34.00	253.14	1.48
M2D	BLACKFOOT	7,621	52,468	6.88	210	1,978	295	2.76	249.81	25.82	177.75	1.41
M2U	REGION 2 UNKNOWN	85	511	6.00	3	14	3	3.33	180.00	30.00	180.00	1.00
M3A	BIGHOLE	4,340	30,472	7.02	91	934	111	2.09	335.50	39.21	275.28	1.22
M3B	GRAVELLYS-PIONEERS	8,299	46,005	5.54	114	1,025	150	1.37	405.23	55.17	305.83	1.33
M3C	YELLOWSTONE	5,572	30,971	5.56	79	886	105	1.43	389.71	53.05	294.92	1.32
M3D	BELTS-BRIDGERS-ELKHORN	12,156	78,813	6.48	199	2,027	270	1.63	396.69	45.08	292.29	1.36
M3U	REGION 3 UNKNOWN	54	253	4.68	3	9	3	5.26	89.00	19.00	89.00	1.00
M4A	EAST FRONT	3,695	17,367	4.70	34	199	57	0.92	509.92	65.10	305.95	1.67
M4B	MOUNTAIN-FOOTHILLS	11,955	60,069	5.02	210	1,816	324	1.76	286.00	36.95	185.65	1.54
M4C	PRAIRE-AGRICULTURE	13,172	59,779	4.54	65	613	88	0.50	915.74	149.71	679.42	1.35
M4U	REGION 4 UNKNOWN	148	460	3.12	6	17	9	3.85	81.00	17.33	54.00	1.50
M5A	BEARTOOTH FACE	2,940	11,941	4.06	60	355	79	2.03	200.33	37.00	150.25	1.33
M5B	MOUNTAIN FOOTHILLS	3,568	14,907	4.18	43	264	57	1.19	350.13	62.85	262.60	1.33
M5C	PRAIRE-AGRICULTURE	11,364	48,296	4.25	71	338	85	0.62	680.64	133.47	567.20	1.20
M5U	REGION 5 UNKNOWN	105	375	3.57	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
M6A	REGION 6 DISTRICTS	11,980	64,358	5.37	20	91	23	0.17	3239.29	527.63	2834.38	1.14
M6U	REGION 6 UNKNOWN	97	491	5.09	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
M7A	REGION 7 DISTRICTS	14,674	76,349	5.20	102	849	139	0.70	747.22	105.51	548.98	1.36
M7U	REGION 7 UNKNOWN	14	88	6.20	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
M9U	REGION UNKNOWN	105	324	3.08	3	40	3	2.70	114.00	37.00	114.00	1.00

TABLE 2: DEER HUNTING EFFORT AND LION OBSERVATIONS

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Deer Hunting Effort and Lion Observations
By Lion Regulations/Quota Unit

Location	Lion Regs/Quota Unit	Deer Hunters	Hunter Days	Days/ Hunter	Hunter Observ Days	Observ Days	Lions Seen	Percent Observ	Days/ Observ	Hunters /Lion	Days /Lion	Lions/ Observ
R100	HD:100	2,478	17,824	7.19	94	1,002	156	3.78	190.30	15.87	114.18	1.67
R101	HD:101,109	2,702	17,495	6.47	68	463	102	2.52	256.83	26.44	171.22	1.50
R102	HD:102	3,446	19,598	5.69	54	480	74	1.57	363.42	46.69	265.58	1.37
R103	HD:103	2,466	14,702	5.96	54	627	91	2.19	272.63	27.16	161.88	1.68
R104	HD:104	1,490	10,817	7.26	34	349	43	2.29	317.58	35.00	254.07	1.25
R110	HD:110	1,490	8,117	5.45	43	360	57	2.86	190.67	26.25	143.00	1.33
R120	HD:120	2,211	11,855	5.36	40	298	57	1.80	298.36	38.95	208.85	1.43
R121	HD:121	2,046	16,871	8.24	74	781	114	3.61	228.62	18.03	148.60	1.54
R122	HD:122	1,995	13,096	6.56	43	278	43	2.13	307.60	46.87	307.60	1.00
R123	HD:123	440	3,236	7.35	3	28	3	0.65	1140.00	155.00	1140.00	1.00
R124	HD:124	386	3,423	8.87	6	65	9	1.47	603.00	45.33	402.00	1.50
R130	HD:130	2,251	11,078	4.92	37	335	60	1.64	300.23	37.76	185.86	1.62
R132	HD:132,170	2,171	13,802	6.36	14	91	17	0.65	972.60	127.50	810.50	1.20
R140	HD:140	605	3,369	5.57	20	227	37	3.29	169.57	16.38	91.31	1.86
R141	HD:141	145	690	4.76	6	20	6	3.92	121.50	25.50	121.50	1.00
R150	HD:150,151	60	250	4.19	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
R199	HD:R1 UNKN	65	468	7.17	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
R200	HD:200,201	2,418	16,394	6.78	65	610	85	2.70	251.13	28.40	192.53	1.30
R202	HD:202,203	2,532	16,666	6.58	119	974	233	4.71	139.81	10.88	71.61	1.95
R204	HD:204,260,261	3,914	32,140	8.21	60	826	82	1.52	539.24	47.55	390.48	1.38
R210	HD:210,211,216	1,323	8,742	6.61	31	309	51	2.36	280.00	25.89	171.11	1.64
R212	HD:212,215	1,927	13,533	7.02	34	290	40	1.77	397.33	48.50	340.57	1.17
R213	HD:213,214	596	4,308	7.23	9	119	14	1.43	506.00	42.00	303.60	1.67
R240	HD:240	2,069	13,416	6.48	28	207	45	1.37	472.70	45.56	295.44	1.60
R250	HD:250	1,320	9,298	7.05	26	139	34	1.94	364.00	38.75	273.00	1.33
R270	HD:270	2,168	14,152	6.53	51	639	71	2.36	277.00	30.56	199.44	1.39
R280	HD:280,281,284,293	2,058	13,544	6.58	45	485	68	2.21	298.25	30.21	198.83	1.50
R282	HD:282	193	894	4.63	6	51	9	2.94	157.50	22.67	105.00	1.50
R283	HD:283,285	3,366	20,064	5.96	85	514	111	2.53	235.63	30.41	181.26	1.30
R290	HD:290,291,292	2,679	17,966	6.71	77	928	108	2.86	234.44	24.84	166.58	1.41
R299	HD:R2 UNKN	85	511	6.00	3	14	3	3.33	180.00	30.00	180.00	1.00
R300	HD:300,302,328,329	1,357	6,934	5.11	17	136	20	1.26	407.17	68.29	349.00	1.17
R301	HD:301	931	4,771	5.13	11	79	14	1.22	420.25	65.60	336.20	1.25
R310	HD:310,311,360,361,362	2,943	16,839	5.72	48	596	62	1.64	349.00	47.14	269.68	1.29
R312	HD:312,393	3,128	17,671	5.65	28	270	54	0.91	622.60	58.00	327.68	1.90
R313	HD:313,316	431	1,675	3.88	6	34	11	1.32	295.00	38.00	147.50	2.00
R314	HD:314	937	4,110	4.39	6	99	6	0.61	724.00	165.00	724.00	1.00
R315	HD:315	1,927	8,844	4.59	28	326	34	1.47	311.60	56.58	259.67	1.20
R317	HD:317	763	3,576	4.68	9	77	11	1.12	420.00	67.25	315.00	1.33
R318	HD:318,350	1,044	7,709	7.38	20	213	23	1.90	388.00	46.00	339.50	1.14
R319	HD:319,341	1,113	8,972	8.06	28	216	34	2.55	316.10	32.67	263.42	1.20
R320	HD:320,333	3,238	16,828	5.20	57	485	77	1.75	296.45	42.26	219.59	1.35
R321	HD:321,331,332	1,967	13,013	6.62	37	423	43	1.88	352.69	46.20	305.67	1.15
R322	HD:322,326,330	2,642	12,676	4.80	23	258	31	0.86	558.25	84.64	406.00	1.38
R323	HD:323,324,325,327	1,655	9,568	5.78	20	145	23	1.20	481.57	72.87	421.38	1.14
R335	HD:335,339,343	2,217	14,515	6.55	37	281	45	1.66	393.38	48.81	319.63	1.23
R340	HD:340	1,456	8,486	5.83	26	295	34	1.75	332.22	42.75	249.17	1.33
R370	HD:370,380	2,557	15,276	5.97	43	500	54	1.66	358.80	47.42	283.26	1.27
R390	HD:390,391,392	2,166	14,799	6.83	43	437	60	1.97	347.60	36.33	248.29	1.40
R399	HD:R3 UNKN	54	253	4.68	3	9	3	5.26	89.00	19.00	89.00	1.00
R400	HD:400,401,403,406,415,441	4,337	20,021	4.62	34	284	45	0.79	587.83	95.50	440.88	1.33
R404	HD:404,421,444,450	4,039	17,356	4.30	17	74	34	0.42	1019.17	118.58	509.58	2.00
R405	HD:405,447,471	3,888	16,425	4.22	20	148	23	0.51	826.71	171.25	723.38	1.14
R410	HD:410,417,419,426	3,494	15,962	4.57	23	267	37	0.65	703.00	94.69	432.62	1.63
R411	HD:411,412	4,638	22,090	4.76	82	698	111	1.77	268.38	41.90	199.56	1.34
R413	HD:413,432	2,895	13,348	4.61	54	474	88	1.86	247.53	32.90	151.71	1.63
R416	HD:416,446,449,452,454	1,941	10,544	5.43	34	247	48	1.75	309.58	40.24	218.53	1.42
R418	HD:418,420,448	1,501	7,967	5.31	23	309	43	1.51	350.88	35.27	187.13	1.88
R422	HD:422,423,424,425,442	1,643	7,382	4.49	6	40	6	0.35	1300.50	289.50	1300.50	1.00
R445	HD:445,455	1,632	6,119	3.75	20	88	34	1.22	308.00	47.92	179.67	1.71
R499	HD:R4 UNKN	148	460	3.12	6	17	9	3.85	81.00	17.33	54.00	1.50

TABLE 2: DEER HUNTING EFFORT AND LION OBSERVATIONS

September 28, 2004

page 2

Montana Fish Wildlife and Parks
 2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
 Deer Hunting Effort and Lion Observations
 By Lion Regulations/Quota Unit

Location	Lion Regs/Quota Unit	Deer Hunters	Hunter Days	Days/Hunter	Hunter Observ Days	Observ Days	Lions Seen	Percent Observ	Days/Observer	Hunters /Lion	Days /Lion	Lions/Observer
R500	HD:500,570	3,253	11,492	3.53	20	97	20	0.61	578.43	163.71	578.43	1.00
R502	HD:502,575	4,459	17,850	4.00	20	150	26	0.45	898.43	174.56	698.78	1.29
R510	HD:510	667	3,454	5.18	6	40	6	0.85	608.50	117.50	608.50	1.00
R511	HD:511	781	3,068	3.93	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
R520	HD:520	1,916	8,140	4.25	31	190	37	1.63	260.73	51.92	220.62	1.18
R530	HD:530,590	4,158	18,954	4.56	31	91	40	0.75	607.09	104.64	477.00	1.27
R540	HD:540	676	3,088	4.57	11	48	14	1.68	272.00	47.60	217.60	1.25
R560	HD:560	1,044	3,800	3.64	28	165	43	2.72	133.90	24.53	89.27	1.50
R580	HD:580	1,572	5,296	3.37	28	176	37	1.81	186.60	42.62	143.54	1.30
R599	HD:R5 UNKN	105	375	3.57	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
R600	HD:600'S (NOT 680,690)	9,783	52,380	5.35	11	51	14	0.12	4613.75	689.40	3691.00	1.25
R680	HD:680,690	2,600	11,977	4.61	9	40	9	0.33	1406.67	305.33	1406.67	1.00
R699	HD:R6 UNKN	97	491	5.09	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
R700	HD:700'S	14,674	76,349	5.20	102	849	139	0.70	747.22	105.51	548.98	1.36
R799	HD:R7 UNKN	14	88	6.20	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
R999	HD:REGION UNKN	105	324	3.08	3	40	3	2.70	114.00	37.00	114.00	1.00

TABLE 2: DEER HUNTING EFFORT AND LION OBSERVATIONS

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Deer Hunting Effort and Lion Observations
By Deer Hunting District

Location	Deer Hunters	Hunter Days	Days/ Hunter	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Days/ Observ	Hunters /Lion	Days /Lion	Lions/ Observ
100	2,478	17,824	7.19	94	1,002	156	3.78	190.30	15.87	114.18	1.67
101	2,347	15,210	6.48	60	434	88	2.54	255.19	26.68	172.87	1.48
102	3,446	19,598	5.69	54	480	74	1.57	363.42	46.69	265.58	1.37
103	2,466	14,702	5.96	54	627	91	2.19	272.63	27.16	161.88	1.68
104	1,490	10,817	7.26	34	349	43	2.29	317.58	35.00	254.07	1.25
109	417	2,285	5.48	9	28	14	2.04	268.33	29.40	161.00	1.67
110	1,490	8,117	5.45	43	360	57	2.86	190.67	26.25	143.00	1.33
120	2,211	11,855	5.36	40	298	57	1.80	298.36	38.95	208.85	1.43
121	2,046	16,871	8.24	74	781	114	3.61	228.62	18.03	148.60	1.54
122	1,995	13,096	6.56	43	278	43	2.13	307.60	46.87	307.60	1.00
123	440	3,236	7.35	3	28	3	0.65	1140.00	155.00	1140.00	1.00
124	386	3,423	8.87	6	65	9	1.47	603.00	45.33	402.00	1.50
130	2,251	11,078	4.92	37	335	60	1.64	300.23	37.76	185.86	1.62
132	1,294	8,154	6.30	6	14	6	0.44	1436.50	228.00	1436.50	1.00
140	605	3,369	5.57	20	227	37	3.29	169.57	16.38	91.31	1.86
141	145	690	4.76	6	20	6	3.92	121.50	25.50	121.50	1.00
150	57	244	4.30	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
151	3	6	2.00	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
170	968	5,648	5.84	9	77	11	0.88	663.33	85.25	497.50	1.33
199	65	468	7.17	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
200	687	4,717	6.87	23	230	26	3.31	207.75	26.89	184.67	1.13
201	1,819	11,677	6.42	43	380	60	2.34	274.27	30.52	195.90	1.40
202	1,507	9,667	6.41	77	534	133	5.08	126.15	11.30	72.47	1.74
203	1,149	6,999	6.09	45	440	99	3.95	154.13	11.57	70.46	2.19
204	1,677	9,925	5.92	31	315	43	1.86	317.91	39.40	233.13	1.36
210	928	5,767	6.21	17	199	34	1.83	338.67	27.25	169.33	2.00
211	210	1,300	6.19	6	82	9	2.70	229.00	24.67	152.67	1.50
212	1,226	7,783	6.35	14	102	14	1.16	548.40	86.40	548.40	1.00
213	329	2,293	6.97	6	91	6	1.72	404.00	58.00	404.00	1.00
214	321	2,015	6.28	3	28	9	0.88	710.00	37.67	236.67	3.00
215	854	5,750	6.73	20	187	26	2.33	289.43	33.44	225.11	1.29
216	264	1,675	6.34	9	28	9	3.23	196.67	31.00	196.67	1.00
240	2,069	13,416	6.48	28	207	45	1.37	472.70	45.56	295.44	1.60
250	1,320	9,298	7.05	26	139	34	1.94	364.00	38.75	273.00	1.33
260	1,799	18,250	10.14	26	491	34	1.42	714.44	52.83	535.83	1.33
261	650	3,965	6.10	3	20	6	0.44	1397.00	114.50	698.50	2.00
270	2,168	14,152	6.53	51	639	71	2.36	277.00	30.56	199.44	1.39
280	108	678	6.29	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
281	1,084	6,531	6.02	34	403	51	3.14	191.75	21.22	127.83	1.50
282	193	894	4.63	6	51	9	2.94	157.50	22.67	105.00	1.50
283	1,260	6,676	5.30	28	153	34	2.25	235.20	37.00	196.00	1.20
284	179	1,198	6.70	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
285	2,259	13,388	5.93	57	360	77	2.51	235.85	29.48	174.70	1.35
290	244	2,600	10.65	6	71	6	2.33	458.00	43.00	458.00	1.00
291	559	3,247	5.81	11	37	17	2.03	286.00	32.83	190.67	1.50
292	1,944	12,119	6.23	60	820	85	3.07	203.33	22.83	142.33	1.43
293	832	5,137	6.18	11	82	17	1.37	452.50	48.83	301.67	1.50
299	85	511	6.00	3	14	3	3.33	180.00	30.00	180.00	1.00
300	304	1,467	4.83	3	3	3	0.93	517.00	107.00	517.00	1.00
301	931	4,771	5.13	11	79	14	1.22	420.25	65.60	336.20	1.25
302	409	2,046	5.01	6	71	6	1.39	360.50	72.00	360.50	1.00
310	238	1,368	5.74	11	162	20	4.76	120.50	12.00	68.86	1.75
311	2,063	11,276	5.46	14	216	14	0.69	794.60	145.40	794.60	1.00
312	1,984	11,342	5.72	23	244	43	1.14	499.50	46.60	266.40	1.88
313	392	1,564	3.99	6	34	11	1.45	275.50	34.50	137.75	2.00
314	937	4,110	4.39	6	99	6	0.61	724.00	165.00	724.00	1.00
315	1,927	8,844	4.59	28	326	34	1.47	311.60	56.58	259.67	1.20
316	40	111	2.79	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
317	763	3,576	4.68	9	77	11	1.12	420.00	67.25	315.00	1.33
318	505	3,670	7.26	3	28	3	0.56	1293.00	178.00	1293.00	1.00
319	676	5,242	7.76	20	139	20	2.94	263.86	34.00	263.86	1.00
320	1,240	6,942	5.60	26	193	40	2.06	271.78	31.21	174.71	1.56
321	395	2,475	6.27	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
322	1,325	5,537	4.18	9	102	9	0.64	650.33	155.67	650.33	1.00
323	238	1,294	5.43	3	9	3	1.19	456.00	84.00	456.00	1.00
324	375	2,242	5.98	9	62	11	2.27	263.33	33.00	197.50	1.33
325	897	4,882	5.44	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90

TABLE 2: DEER HUNTING EFFORT AND LION OBSERVATIONS

September 28, 2004

page 2

Montana Fish Wildlife and Parks
 2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
 Deer Hunting Effort and Lion Observations
 By Deer Hunting District

Location	Deer Hunters	Hunter Days	Days/ Hunter	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Days/ Observ	Hunters /Lion	Days /Lion	Lions/ Observ
326	806	4,070	5.05	6	74	11	0.70	717.00	71.00	358.50	2.00
327	187	1,149	6.14	9	74	9	4.55	135.00	22.00	135.00	1.00
328	204	937	4.58	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
329	502	2,483	4.94	9	62	11	1.69	291.67	44.25	218.75	1.33
330	605	3,068	5.08	9	82	11	1.41	360.33	53.25	270.25	1.33
331	1,280	8,432	6.59	31	349	37	2.44	270.09	34.69	228.54	1.18
332	386	2,106	5.46	6	74	6	1.47	371.00	68.00	371.00	1.00
333	2,058	9,886	4.80	31	292	37	1.52	316.64	55.77	267.92	1.18
335	704	4,450	6.32	14	122	14	2.02	313.60	49.60	313.60	1.00
339	738	4,263	5.78	9	37	11	1.15	500.67	65.00	375.50	1.33
340	1,456	8,486	5.83	26	295	34	1.75	332.22	42.75	249.17	1.33
341	454	3,729	8.21	9	77	14	1.88	438.00	32.00	262.80	1.67
343	843	5,801	6.88	14	122	20	1.68	408.80	42.43	292.00	1.40
350	568	4,039	7.12	17	184	20	3.00	237.17	28.57	203.29	1.17
360	528	2,588	4.90	14	142	17	2.69	182.40	31.00	152.00	1.20
361	91	712	7.84	6	62	9	6.25	125.50	10.67	83.67	1.50
362	162	894	5.53	3	14	3	1.75	315.00	57.00	315.00	1.00
370	349	1,890	5.41	11	173	14	3.25	166.50	24.60	133.20	1.25
380	2,265	13,385	5.91	31	326	40	1.38	428.73	57.00	336.86	1.27
390	250	1,396	5.59	9	43	26	3.41	164.00	9.78	54.67	3.00
391	860	5,262	6.12	3	14	3	0.33	1854.00	303.00	1854.00	1.00
392	1,149	8,140	7.08	31	380	31	2.72	260.73	36.82	260.73	1.00
393	1,243	6,329	5.09	6	26	11	0.46	1115.00	109.50	557.50	2.00
399	54	253	4.68	3	9	3	5.26	89.00	19.00	89.00	1.00
400	1,538	6,653	4.32	3	68	3	0.18	2344.00	542.00	2344.00	1.00
401	1,473	5,977	4.06	9	60	14	0.58	702.00	103.80	421.20	1.67
403	213	761	3.57	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
404	2,586	10,993	4.25	3	11	3	0.11	3873.00	911.00	3873.00	1.00
405	1,096	3,579	3.27	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
406	724	3,009	4.16	9	60	9	1.18	353.33	85.00	353.33	1.00
410	1,144	6,034	5.28	11	233	23	0.99	531.50	50.37	265.75	2.00
411	2,955	13,678	4.63	57	582	79	1.92	240.95	37.18	172.11	1.40
412	2,004	8,413	4.20	26	116	31	1.27	329.33	64.18	269.45	1.22
413	1,902	8,356	4.39	23	253	28	1.19	368.00	67.00	294.40	1.25
415	74	352	4.77	3	11	3	3.85	124.00	26.00	124.00	1.00
416	687	3,681	5.36	9	40	14	1.24	432.33	48.40	259.40	1.67
417	789	3,468	4.40	11	34	14	1.44	305.50	55.60	244.40	1.25
418	800	3,800	4.75	11	116	11	1.42	334.75	70.50	334.75	1.00
419	556	1,740	3.13	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
420	150	630	4.19	3	28	3	1.89	222.00	53.00	222.00	1.00
421	627	2,432	3.88	11	34	28	1.81	214.25	22.10	85.70	2.50
422	463	1,731	3.74	3	28	3	0.61	610.00	163.00	610.00	1.00
423	355	1,371	3.86	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
424	292	1,465	5.01	3	11	3	0.97	516.00	103.00	516.00	1.00
425	210	812	3.86	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
426	1,203	4,720	3.92	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
432	1,135	4,992	4.40	31	221	60	2.75	159.91	19.05	83.76	1.91
441	667	3,270	4.90	11	85	17	1.70	288.00	39.17	192.00	1.50
442	412	2,004	4.87	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
444	497	1,731	3.49	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
445	1,516	5,659	3.73	14	54	28	0.94	398.80	53.40	199.40	2.00
446	548	2,847	5.20	9	31	9	1.55	334.33	64.33	334.33	1.00
447	2,194	9,835	4.48	17	139	20	0.78	577.50	110.43	495.00	1.17
448	678	3,536	5.21	9	165	28	1.26	415.33	23.90	124.60	3.33
449	360	1,465	4.06	6	31	6	1.57	258.00	63.50	258.00	1.00
450	477	2,200	4.61	3	28	3	0.60	775.00	168.00	775.00	1.00
452	156	542	3.47	3	11	6	1.82	191.00	27.50	95.50	2.00
454	386	2,009	5.21	11	133	14	2.94	177.00	27.20	141.60	1.25
455	116	460	3.95	6	34	6	4.88	81.00	20.50	81.00	1.00
471	812	3,011	3.71	3	9	3	0.35	1061.00	286.00	1061.00	1.00
499	148	460	3.12	6	17	9	3.85	81.00	17.33	54.00	1.50

TABLE 2: DEER HUNTING EFFORT AND LION OBSERVATIONS

September 28, 2004

page 3

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Deer Hunting Effort and Lion Observations
By Deer Hunting District

Location	Deer Hunters	Hunter Days	Days/ Hunter	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Days/ Observ	Hunters /Lion	Days /Lion	Lions/ Observ
500	1,714	6,392	3.73	6	11	6	0.33	1126.00	302.00	1126.00	1.00
502	1,845	7,070	3.83	9	17	9	0.46	830.33	216.67	830.33	1.00
510	667	3,454	5.18	6	40	6	0.85	608.50	117.50	608.50	1.00
511	781	3,068	3.93	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
520	1,916	8,140	4.25	31	190	37	1.63	260.73	51.92	220.62	1.18
530	1,462	5,767	3.95	14	23	23	0.97	406.40	64.38	254.00	1.60
540	676	3,088	4.57	11	48	14	1.68	272.00	47.60	217.60	1.25
560	1,044	3,800	3.64	28	165	43	2.72	133.90	24.53	89.27	1.50
570	1,612	5,100	3.16	14	85	14	0.88	359.40	113.60	359.40	1.00
575	2,787	10,780	3.87	11	133	17	0.41	949.50	163.67	633.00	1.50
580	1,572	5,296	3.37	28	176	37	1.81	186.60	42.62	143.54	1.30
590	2,830	13,187	4.66	17	68	17	0.60	774.33	166.17	774.33	1.00
599	105	375	3.57	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
600	1,294	5,637	4.36	3	3	6	0.22	1986.00	228.00	993.00	2.00
610	729	3,003	4.12	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
611	568	2,251	3.97	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
620	934	4,107	4.40	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
621	417	2,080	4.99	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
622	238	1,263	5.30	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
630	1,243	6,372	5.13	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
631	148	866	5.87	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
632	150	624	4.15	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
640	1,215	6,431	5.29	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
641	443	2,685	6.06	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
650	914	4,022	4.40	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
651	1,462	8,112	5.55	9	48	9	0.58	952.67	171.67	952.67	1.00
652	202	721	3.58	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
670	976	4,206	4.31	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
680	630	2,586	4.10	3	6	3	0.45	911.00	222.00	911.00	1.00
690	2,109	9,392	4.45	6	34	6	0.27	1654.50	371.50	1654.50	1.00
699	97	491	5.09	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
700	2,441	11,404	4.67	14	148	14	0.58	803.60	172.00	803.60	1.00
701	2,813	11,929	4.24	9	133	9	0.30	1401.00	330.33	1401.00	1.00
702	2,001	9,468	4.73	23	199	28	1.13	417.00	70.50	333.60	1.25
703	3,369	18,894	5.61	20	148	28	0.59	951.00	118.70	665.70	1.43
704	2,733	12,715	4.65	31	184	45	1.14	407.27	60.19	280.00	1.45
705	2,469	11,938	4.83	6	37	14	0.23	2103.00	174.00	841.20	2.50
799	14	88	6.20	0	0	0	0.00	-9.90	-9.90	-9.90	-9.90
999	105	324	3.08	3	40	3	2.70	114.00	37.00	114.00	1.00

TABLE 3: STATISTICAL CONFIDENCE AND RELATIVE PRECISION

September 28, 2004

page 1

Montana Fish Wildlife and Parks
 2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
 Statistical Confidence and Relative Precision of Estimates
 Statewide and Regional

Location	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Hunter % RPrec	Hunter Observ	Observ LowBnd	Observ Up Bnd	Observ % RPrec	Lions Seen	Lions LowBnd	Lions Up Bnd	Lions % RPrec
State	127,100	126,480	127,720	0.49	2,251	2,168	2,333	3.66	3,321	3,221	3,421	3.02
Region 1	20,589	20,339	20,838	1.21	556	515	597	7.37	866	815	917	5.91
Region 2	21,750	21,493	22,006	1.18	622	578	665	6.97	954	900	1,007	5.63
Region 3	27,523	27,234	27,811	1.05	480	442	518	7.94	639	595	683	6.88
Region 4	26,555	26,271	26,838	1.07	312	281	343	9.84	477	439	515	7.96
Region 5	16,839	16,614	17,065	1.34	173	150	196	13.21	221	196	247	11.68
Region 6	12,040	11,849	12,231	1.58	20	12	28	39.00	23	14	31	36.48
Region 7	14,685	14,474	14,896	1.43	102	85	120	17.20	139	119	160	14.74
Region U	105	87	123	16.96	3	0	6	103.19	3	0	6	103.19

TABLE 3: STATISTICAL CONFIDENCE AND RELATIVE PRECISION

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Statistical Confidence and Relative Precision of Estimates
By Lion Management Area

Location	Lion Mgmt Area Name	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Hunter % RPrec	Hunter Observ	Observ LowBnd	Observ Up Bnd	Observ % RPrec	Lions Seen	Lions LowBnd	Lions Up Bnd	Lions % RPrec
M1A	CABINET-YAAK	3,627	3,523	3,732	2.89	125	105	144	15.56	199	174	223	12.33
M1B	CLARK FORK	2,705	2,614	2,795	3.34	82	67	98	19.16	125	105	144	15.56
M1C	SALISH	11,345	11,159	11,530	1.63	250	222	277	11.00	366	333	399	9.09
M1D	BOB MARSHALL-MISSIONS	3,996	3,886	4,106	2.75	68	54	82	21.06	108	90	126	16.74
M1E	WHITEFISH	1,490	1,423	1,557	4.50	43	31	54	26.64	57	44	70	23.07
M1F	URBAN	968	914	1,022	5.59	9	3	14	59.58	11	5	17	51.59
M1U	REGION 1 UNKNOWN	65	51	79	21.52	0	0	0	-9.90	0	0	0	-9.90
M2A	LOWER CLARK FORK	4,561	4,444	4,678	2.57	182	158	205	12.90	318	287	349	9.75
M2B	BITTERROOT	8,081	7,924	8,237	1.93	159	137	181	13.79	233	206	259	11.40
M2C	ROCK CR-DEERLODGE	3,571	3,467	3,674	2.91	71	56	86	20.64	105	87	123	16.96
M2D	BLACKFOOT	7,621	7,469	7,772	1.99	210	185	235	12.00	295	265	325	10.12
M2U	REGION 2 UNKNOWN	85	69	101	18.84	3	0	6	103.19	3	0	6	103.19
M3A	BIGHOLE	4,340	4,225	4,454	2.64	91	74	107	18.24	111	92	129	16.52
M3B	GRAVELLYS-PIONEERS	8,299	8,141	8,457	1.91	114	95	132	16.32	150	129	172	14.17
M3C	YELLOWSTONE	5,572	5,442	5,701	2.33	79	64	95	19.50	105	87	123	16.96
M3D	BELTS-BRIDGERS-ELKHORN	12,156	11,965	12,348	1.58	199	174	223	12.33	270	241	298	10.59
M3U	REGION 3 UNKNOWN	54	41	67	23.67	3	0	6	103.19	3	0	6	103.19
M4A	EAST FRONT	3,695	3,590	3,801	2.86	34	24	44	29.79	57	44	70	23.07
M4B	MOUNTAIN-FOOTHILLS	11,955	11,765	12,145	1.59	210	185	235	12.00	324	292	355	9.66
M4C	PRAIRE-AGRICULTURE	13,172	12,973	13,372	1.51	65	51	79	21.52	88	72	104	18.53
M4U	REGION 4 UNKNOWN	148	126	169	14.31	6	2	10	72.96	9	3	14	59.58
M5A	BEARTOOTH FACE	2,940	2,846	3,035	3.21	60	46	73	22.52	79	64	95	19.50
M5B	MOUNTAIN FOOTHILLS	3,568	3,464	3,672	2.91	43	31	54	26.64	57	44	70	23.07
M5C	PRAIRE-AGRICULTURE	11,364	11,179	11,550	1.63	71	56	86	20.64	85	69	101	18.84
M5U	REGION 5 UNKNOWN	105	87	123	16.96	0	0	0	-9.90	0	0	0	-9.90
M6A	REGION 6 DISTRICTS	11,980	11,790	12,171	1.59	20	12	28	39.00	23	14	31	36.48
M6U	REGION 6 UNKNOWN	97	79	114	17.70	0	0	0	-9.90	0	0	0	-9.90
M7A	REGION 7 DISTRICTS	14,674	14,463	14,884	1.44	102	85	120	17.20	139	119	160	14.74
M7U	REGION 7 UNKNOWN	14	8	21	46.15	0	0	0	-9.90	0	0	0	-9.90
M9U	REGION UNKNOWN	105	87	123	16.96	3	0	6	103.19	3	0	6	103.19

TABLE 3: STATISTICAL CONFIDENCE AND RELATIVE PRECISION

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Statistical Confidence and Relative Precision of Estimates
By Lion Regulations/Quota Unit

Location	Lion Regs/Quota Unit	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Hunter % RPrec	Hunter Observ	Observ LowBnd	Observ Up Bnd	Observ % RPrec	Lions Seen	Lions LowBnd	Lions Up Bnd	Lions % RPrec
R100	HD:100	2,478	2,391	2,564	3.49	94	77	110	17.96	156	134	178	13.91
R101	HD:101,109	2,702	2,612	2,792	3.34	68	54	82	21.06	102	85	120	17.20
R102	HD:102	3,446	3,344	3,548	2.96	54	41	67	23.67	74	59	89	20.24
R103	HD:103	2,466	2,380	2,553	3.50	54	41	67	23.67	91	74	107	18.24
R104	HD:104	1,490	1,423	1,557	4.50	34	24	44	29.79	43	31	54	26.64
R110	HD:110	1,490	1,423	1,557	4.50	43	31	54	26.64	57	44	70	23.07
R120	HD:120	2,211	2,129	2,293	3.70	40	29	51	27.58	57	44	70	23.07
R121	HD:121	2,046	1,968	2,125	3.84	74	59	89	20.24	114	95	132	16.32
R122	HD:122	1,995	1,918	2,073	3.89	43	31	54	26.64	43	31	54	26.64
R123	HD:123	440	403	476	8.29	3	0	6	103.19	3	0	6	103.19
R124	HD:124	386	352	420	8.85	6	2	10	72.96	9	3	14	59.58
R130	HD:130	2,251	2,168	2,333	3.66	37	26	47	28.62	60	46	73	22.52
R132	HD:132,170	2,171	2,090	2,252	3.73	14	8	21	46.15	17	10	24	42.13
R140	HD:140	605	562	647	7.07	20	12	28	39.00	37	26	47	28.62
R141	HD:141	145	124	166	14.45	6	2	10	72.96	6	2	10	72.96
R150	HD:150,151	60	46	73	22.52	0	0	0	-9.90	0	0	0	-9.90
R199	HD:R1 UNKN	65	51	79	21.52	0	0	0	-9.90	0	0	0	-9.90
R200	HD:200,201	2,418	2,333	2,504	3.54	65	51	79	21.52	85	69	101	18.84
R202	HD:202,203	2,532	2,444	2,619	3.45	119	100	138	15.92	233	206	259	11.40
R204	HD:204,260,261	3,914	3,805	4,023	2.78	60	46	73	22.52	82	67	98	19.16
R210	HD:210,211,216	1,323	1,259	1,386	4.78	31	22	41	31.11	51	39	64	24.32
R212	HD:212,215	1,927	1,851	2,003	3.96	34	24	44	29.79	40	29	51	27.58
R213	HD:213,214	596	554	638	7.12	9	3	14	59.58	14	8	21	46.15
R240	HD:240	2,069	1,990	2,148	3.82	28	19	38	32.63	45	34	57	25.80
R250	HD:250	1,320	1,257	1,383	4.79	26	17	34	34.40	34	24	44	29.79
R270	HD:270	2,168	2,087	2,249	3.73	51	39	64	24.32	71	56	86	20.64
R280	HD:280,281,284,293	2,058	1,979	2,137	3.83	45	34	57	25.80	68	54	82	21.06
R282	HD:282	193	169	217	12.51	6	2	10	72.96	9	3	14	59.58
R283	HD:283,285	3,366	3,265	3,467	3.00	85	69	101	18.84	111	92	129	16.52
R290	HD:290,291,292	2,679	2,589	2,769	3.36	77	61	92	19.86	108	90	126	16.74
R299	HD:R2 UNKN	85	69	101	18.84	3	0	6	103.19	3	0	6	103.19
R300	HD:300,302,328,329	1,357	1,293	1,421	4.72	17	10	24	42.13	20	12	28	39.00
R301	HD:301	931	878	984	5.70	11	5	17	51.59	14	8	21	46.15
R310	HD:310,311,360,361,362	2,943	2,849	3,038	3.20	48	36	60	25.03	62	49	76	22.00
R312	HD:312,393	3,128	3,031	3,225	3.11	28	19	38	32.63	54	41	67	23.67
R313	HD:313,316	431	395	468	8.37	6	2	10	72.96	11	5	17	51.59
R314	HD:314	937	883	990	5.68	6	2	10	72.96	6	2	10	72.96
R315	HD:315	1,927	1,851	2,003	3.96	28	19	38	32.63	34	24	44	29.79
R317	HD:317	763	715	812	6.29	9	3	14	59.58	11	5	17	51.59
R318	HD:318,350	1,044	988	1,101	5.38	20	12	28	39.00	23	14	31	36.48
R319	HD:319,341	1,113	1,055	1,171	5.21	28	19	38	32.63	34	24	44	29.79
R320	HD:320,333	3,238	3,140	3,337	3.05	57	44	70	23.07	77	61	92	19.86
R321	HD:321,331,332	1,967	1,890	2,044	3.92	37	26	47	28.62	43	31	54	26.64
R322	HD:322,326,330	2,642	2,553	2,732	3.38	23	14	31	36.48	31	22	41	31.11
R323	HD:323,324,325,327	1,655	1,584	1,725	4.27	20	12	28	39.00	23	14	31	36.48
R335	HD:335,339,343	2,217	2,135	2,299	3.69	37	26	47	28.62	45	34	57	25.80
R340	HD:340	1,456	1,390	1,522	4.56	26	17	34	34.40	34	24	44	29.79
R370	HD:370,380	2,557	2,469	2,645	3.44	43	31	54	26.64	54	41	67	23.67
R390	HD:390,391,392	2,166	2,085	2,246	3.74	43	31	54	26.64	60	46	73	22.52
R399	HD:R3 UNKN	54	41	67	23.67	3	0	6	103.19	3	0	6	103.19
R400	HD:400,401,403,406,415,441	4,337	4,222	4,451	2.64	34	24	44	29.79	45	34	57	25.80
R404	HD:404,421,444,450	4,039	3,928	4,149	2.74	17	10	24	42.13	34	24	44	29.79
R405	HD:405,447,471	3,888	3,780	3,997	2.79	20	12	28	39.00	23	14	31	36.48
R410	HD:410,417,419,426	3,494	3,391	3,597	2.94	23	14	31	36.48	37	26	47	28.62
R411	HD:411,412	4,638	4,519	4,756	2.55	82	67	98	19.16	111	92	129	16.52
R413	HD:413,432	2,895	2,801	2,989	3.23	54	41	67	23.67	88	72	104	18.53
R416	HD:416,446,449,452,454	1,941	1,865	2,018	3.95	34	24	44	29.79	48	36	60	25.03
R418	HD:418,420,448	1,501	1,434	1,569	4.49	23	14	31	36.48	43	31	54	26.64
R422	HD:422,423,424,425,442	1,643	1,573	1,714	4.29	6	2	10	72.96	6	2	10	72.96
R445	HD:445,455	1,632	1,562	1,702	4.30	20	12	28	39.00	34	24	44	29.79
R499	HD:R4 UNKN	148	126	169	14.31	6	2	10	72.96	9	3	14	59.58

TABLE 3: STATISTICAL CONFIDENCE AND RELATIVE PRECISION

September 28, 2004

page 2

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Statistical Confidence and Relative Precision of Estimates
By Lion Regulations/Quota Unit

Location	Lion Regs/Quota Unit	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Hunter % RPrec	Hunter Observ	Observ LowBnd	Observ Up Bnd	Observ % RPrec	Lions Seen	Lions LowBnd	Lions Up Bnd	Lions % RPrec
R500	HD:500,570	3,253	3,154	3,352	3.05	20	12	28	39.00	20	12	28	39.00
R502	HD:502,575	4,459	4,343	4,575	2.60	20	12	28	39.00	26	17	34	34.40
R510	HD:510	667	622	712	6.73	6	2	10	72.96	6	2	10	72.96
R511	HD:511	781	732	829	6.22	0	0	0	-9.90	0	0	0	-9.90
R520	HD:520	1,916	1,840	1,992	3.97	31	22	41	31.11	37	26	47	28.62
R530	HD:530,590	4,158	4,046	4,270	2.70	31	22	41	31.11	40	29	51	27.58
R540	HD:540	676	630	721	6.69	11	5	17	51.59	14	8	21	46.15
R560	HD:560	1,044	988	1,101	5.38	28	19	38	32.63	43	31	54	26.64
R580	HD:580	1,572	1,503	1,641	4.38	28	19	38	32.63	37	26	47	28.62
R599	HD:R5 UNKN	105	87	123	16.96	0	0	0	-9.90	0	0	0	-9.90
R600	HD:600'S (NOT 680,690)	9,783	9,612	9,955	1.76	11	5	17	51.59	14	8	21	46.15
R680	HD:680,690	2,600	2,511	2,688	3.41	9	3	14	59.58	9	3	14	59.58
R699	HD:R6 UNKN	97	79	114	17.70	0	0	0	-9.90	0	0	0	-9.90
R700	HD:700'S	14,674	14,463	14,884	1.44	102	85	120	17.20	139	119	160	14.74
R799	HD:R7 UNKN	14	8	21	46.15	0	0	0	-9.90	0	0	0	-9.90
R999	HD:REGION UNKN	105	87	123	16.96	3	0	6	103.19	3	0	6	103.19

TABLE 3: STATISTICAL CONFIDENCE AND RELATIVE PRECISION

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Statistical Confidence and Relative Precision of Estimates
By Deer Hunting District

Location	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Hunter % RPREC	Hunter Observ	Observ LowBnd	Observ Up Bnd	Observ % RPREC	Lions Seen	Lions LowBnd	Lions Up Bnd	Lions % RPREC
100	2,478	2,391	2,564	3.49	94	77	110	17.96	156	134	178	13.91
101	2,347	2,263	2,431	3.59	60	46	73	22.52	88	72	104	18.53
102	3,446	3,344	3,548	2.96	54	41	67	23.67	74	59	89	20.24
103	2,466	2,380	2,553	3.50	54	41	67	23.67	91	74	107	18.24
104	1,490	1,423	1,557	4.50	34	24	44	29.79	43	31	54	26.64
109	417	382	453	8.51	9	3	14	59.58	14	8	21	46.15
110	1,490	1,423	1,557	4.50	43	31	54	26.64	57	44	70	23.07
120	2,211	2,129	2,293	3.70	40	29	51	27.58	57	44	70	23.07
121	2,046	1,968	2,125	3.84	74	59	89	20.24	114	95	132	16.32
122	1,995	1,918	2,073	3.89	43	31	54	26.64	43	31	54	26.64
123	440	403	476	8.29	3	0	6	103.19	3	0	6	103.19
124	386	352	420	8.85	6	2	10	72.96	9	3	14	59.58
130	2,251	2,168	2,333	3.66	37	26	47	28.62	60	46	73	22.52
132	1,294	1,232	1,357	4.83	6	2	10	72.96	6	2	10	72.96
140	605	562	647	7.07	20	12	28	39.00	37	26	47	28.62
141	145	124	166	14.45	6	2	10	72.96	6	2	10	72.96
150	57	44	70	23.07	0	0	0	-9.90	0	0	0	-9.90
151	3	0	6	103.19	0	0	0	-9.90	0	0	0	-9.90
170	968	914	1,022	5.59	9	3	14	59.58	11	5	17	51.59
199	65	51	79	21.52	0	0	0	-9.90	0	0	0	-9.90
200	687	641	732	6.63	23	14	31	36.48	26	17	34	34.40
201	1,819	1,745	1,893	4.08	43	31	54	26.64	60	46	73	22.52
202	1,507	1,440	1,575	4.48	77	61	92	19.86	133	113	153	15.05
203	1,149	1,091	1,208	5.13	45	34	57	25.80	99	82	117	17.44
204	1,677	1,606	1,749	4.24	31	22	41	31.11	43	31	54	26.64
210	928	875	981	5.71	17	10	24	42.13	34	24	44	29.79
211	210	185	235	12.00	6	2	10	72.96	9	3	14	59.58
212	1,226	1,165	1,287	4.96	14	8	21	46.15	14	8	21	46.15
213	329	298	361	9.58	6	2	10	72.96	6	2	10	72.96
214	321	290	352	9.71	3	0	6	103.19	9	3	14	59.58
215	854	804	905	5.95	20	12	28	39.00	26	17	34	34.40
216	264	236	292	10.70	9	3	14	59.58	9	3	14	59.58
240	2,069	1,990	2,148	3.82	28	19	38	32.63	45	34	57	25.80
250	1,320	1,257	1,383	4.79	26	17	34	34.40	34	24	44	29.79
260	1,799	1,726	1,873	4.10	26	17	34	34.40	34	24	44	29.79
261	650	606	694	6.82	3	0	6	103.19	6	2	10	72.96
270	2,168	2,087	2,249	3.73	51	39	64	24.32	71	56	86	20.64
280	108	90	126	16.74	0	0	0	-9.90	0	0	0	-9.90
281	1,084	1,027	1,141	5.28	34	24	44	29.79	51	39	64	24.32
282	193	169	217	12.51	6	2	10	72.96	9	3	14	59.58
283	1,260	1,198	1,322	4.90	28	19	38	32.63	34	24	44	29.79
284	179	156	202	13.00	0	0	0	-9.90	0	0	0	-9.90
285	2,259	2,177	2,342	3.66	57	44	70	23.07	77	61	92	19.86
290	244	217	271	11.13	6	2	10	72.96	6	2	10	72.96
291	559	518	600	7.35	11	5	17	51.59	17	10	24	42.13
292	1,944	1,868	2,021	3.94	60	46	73	22.52	85	69	101	18.84
293	832	781	882	6.03	11	5	17	51.59	17	10	24	42.13
299	85	69	101	18.84	3	0	6	103.19	3	0	6	103.19
300	304	273	334	9.98	3	0	6	103.19	3	0	6	103.19
301	931	878	984	5.70	11	5	17	51.59	14	8	21	46.15
302	409	374	444	8.60	6	2	10	72.96	6	2	10	72.96
310	238	212	265	11.26	11	5	17	51.59	20	12	28	39.00
311	2,063	1,984	2,142	3.83	14	8	21	46.15	14	8	21	46.15
312	1,984	1,907	2,061	3.90	23	14	31	36.48	43	31	54	26.64
313	392	357	426	8.78	6	2	10	72.96	11	5	17	51.59
314	937	883	990	5.68	6	2	10	72.96	6	2	10	72.96
315	1,927	1,851	2,003	3.96	28	19	38	32.63	34	24	44	29.79
316	40	29	51	27.58	0	0	0	-9.90	0	0	0	-9.90
317	763	715	812	6.29	9	3	14	59.58	11	5	17	51.59
318	505	466	544	7.73	3	0	6	103.19	3	0	6	103.19
319	676	630	721	6.69	20	12	28	39.00	20	12	28	39.00
320	1,240	1,179	1,302	4.94	26	17	34	34.40	40	29	51	27.58
321	395	360	429	8.75	0	0	0	-9.90	0	0	0	-9.90
322	1,325	1,262	1,389	4.77	9	3	14	59.58	9	3	14	59.58
323	238	212	265	11.26	3	0	6	103.19	3	0	6	103.19
324	375	341	408	8.98	9	3	14	59.58	11	5	17	51.59
325	897	845	949	5.80	0	0	0	-9.90	0	0	0	-9.90

TABLE 3: STATISTICAL CONFIDENCE AND RELATIVE PRECISION

September 28, 2004

page 2

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Statistical Confidence and Relative Precision of Estimates
By Deer Hunting District

Location	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Hunter % Rprec	Hunter Observ	Observ LowBnd	Observ Up Bnd	Observ % Rprec	Lions Seen	Lions LowBnd	Lions Up Bnd	Lions % Rprec
326	806	757	855	6.12	6	2	10	72.96	11	5	17	51.59
327	187	164	211	12.70	9	3	14	59.58	9	3	14	59.58
328	204	180	229	12.16	0	0	0	-9.90	0	0	0	-9.90
329	502	463	541	7.76	9	3	14	59.58	11	5	17	51.59
330	605	562	647	7.07	9	3	14	59.58	11	5	17	51.59
331	1,280	1,218	1,342	4.86	31	22	41	31.11	37	26	47	28.62
332	386	352	420	8.85	6	2	10	72.96	6	2	10	72.96
333	2,058	1,979	2,137	3.83	31	22	41	31.11	37	26	47	28.62
335	704	658	750	6.55	14	8	21	46.15	14	8	21	46.15
339	738	691	785	6.40	9	3	14	59.58	11	5	17	51.59
340	1,456	1,390	1,522	4.56	26	17	34	34.40	34	24	44	29.79
341	454	417	491	8.16	9	3	14	59.58	14	8	21	46.15
343	843	792	893	5.99	14	8	21	46.15	20	12	28	39.00
350	568	526	609	7.30	17	10	24	42.13	20	12	28	39.00
360	528	488	568	7.57	14	8	21	46.15	17	10	24	42.13
361	91	74	107	18.24	6	2	10	72.96	9	3	14	59.58
362	162	140	184	13.67	3	0	6	103.19	3	0	6	103.19
370	349	317	382	9.30	11	5	17	51.59	14	8	21	46.15
380	2,265	2,182	2,348	3.65	31	22	41	31.11	40	29	51	27.58
390	250	222	277	11.00	9	3	14	59.58	26	17	34	34.40
391	860	809	911	5.93	3	0	6	103.19	3	0	6	103.19
392	1,149	1,091	1,208	5.13	31	22	41	31.11	31	22	41	31.11
393	1,243	1,182	1,304	4.93	6	2	10	72.96	11	5	17	51.59
399	54	41	67	23.67	3	0	6	103.19	3	0	6	103.19
400	1,538	1,470	1,607	4.43	3	0	6	103.19	3	0	6	103.19
401	1,473	1,406	1,540	4.53	9	3	14	59.58	14	8	21	46.15
403	213	188	238	11.92	0	0	0	-9.90	0	0	0	-9.90
404	2,586	2,497	2,674	3.42	3	0	6	103.19	3	0	6	103.19
405	1,096	1,038	1,153	5.25	0	0	0	-9.90	0	0	0	-9.90
406	724	677	771	6.46	9	3	14	59.58	9	3	14	59.58
410	1,144	1,085	1,203	5.14	11	5	17	51.59	23	14	31	36.48
411	2,955	2,860	3,049	3.20	57	44	70	23.07	79	64	95	19.50
412	2,004	1,926	2,082	3.88	26	17	34	34.40	31	22	41	31.11
413	1,902	1,826	1,977	3.99	23	14	31	36.48	28	19	38	32.63
415	74	59	89	20.24	3	0	6	103.19	3	0	6	103.19
416	687	641	732	6.63	9	3	14	59.58	14	8	21	46.15
417	789	740	838	6.19	11	5	17	51.59	14	8	21	46.15
418	800	751	850	6.14	11	5	17	51.59	11	5	17	51.59
419	556	515	597	7.37	0	0	0	-9.90	0	0	0	-9.90
420	150	129	172	14.17	3	0	6	103.19	3	0	6	103.19
421	627	584	671	6.94	11	5	17	51.59	28	19	38	32.63
422	463	425	500	8.08	3	0	6	103.19	3	0	6	103.19
423	355	322	388	9.23	0	0	0	-9.90	0	0	0	-9.90
424	292	263	322	10.17	3	0	6	103.19	3	0	6	103.19
425	210	185	235	12.00	0	0	0	-9.90	0	0	0	-9.90
426	1,203	1,143	1,264	5.01	0	0	0	-9.90	0	0	0	-9.90
432	1,135	1,077	1,194	5.16	31	22	41	31.11	60	46	73	22.52
441	667	622	712	6.73	11	5	17	51.59	17	10	24	42.13
442	412	376	447	8.57	0	0	0	-9.90	0	0	0	-9.90
444	497	458	535	7.80	0	0	0	-9.90	0	0	0	-9.90
445	1,516	1,448	1,583	4.47	14	8	21	46.15	28	19	38	32.63
446	548	507	588	7.43	9	3	14	59.58	9	3	14	59.58
447	2,194	2,113	2,275	3.71	17	10	24	42.13	20	12	28	39.00
448	678	633	724	6.67	9	3	14	59.58	28	19	38	32.63
449	360	327	393	9.16	6	2	10	72.96	6	2	10	72.96
450	477	439	515	7.96	3	0	6	103.19	3	0	6	103.19
452	156	134	178	13.91	3	0	6	103.19	6	2	10	72.96
454	386	352	420	8.85	11	5	17	51.59	14	8	21	46.15
455	116	98	135	16.12	6	2	10	72.96	6	2	10	72.96
471	812	762	861	6.10	3	0	6	103.19	3	0	6	103.19
499	148	126	169	14.31	6	2	10	72.96	9	3	14	59.58

TABLE 3: STATISTICAL CONFIDENCE AND RELATIVE PRECISION

September 28, 2004

page 3

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Statistical Confidence and Relative Precision of Estimates
By Deer Hunting District

Location	Deer Hunters	Hunters Low Bnd	Hunters Up Bnd	Hunter % RPrec	Hunter Observ	Observ LowBnd	Observ Up Bnd	Observ % RPrec	Lions Seen	Lions LowBnd	Lions Up Bnd	Lions % RPrec
500	1,714	1,642	1,786	4.20	6	2	10	72.96	6	2	10	72.96
502	1,845	1,770	1,920	4.05	9	3	14	59.58	9	3	14	59.58
510	667	622	712	6.73	6	2	10	72.96	6	2	10	72.96
511	781	732	829	6.22	0	0	0	-9.90	0	0	0	-9.90
520	1,916	1,840	1,992	3.97	31	22	41	31.11	37	26	47	28.62
530	1,462	1,395	1,528	4.55	14	8	21	46.15	23	14	31	36.48
540	676	630	721	6.69	11	5	17	51.59	14	8	21	46.15
560	1,044	988	1,101	5.38	28	19	38	32.63	43	31	54	26.64
570	1,612	1,542	1,682	4.33	14	8	21	46.15	14	8	21	46.15
575	2,787	2,695	2,879	3.29	11	5	17	51.59	17	10	24	42.13
580	1,572	1,503	1,641	4.38	28	19	38	32.63	37	26	47	28.62
590	2,830	2,737	2,922	3.27	17	10	24	42.13	17	10	24	42.13
599	105	87	123	16.96	0	0	0	-9.90	0	0	0	-9.90
600	1,294	1,232	1,357	4.83	3	0	6	103.19	6	2	10	72.96
610	729	682	776	6.44	0	0	0	-9.90	0	0	0	-9.90
611	568	526	609	7.30	0	0	0	-9.90	0	0	0	-9.90
620	934	881	987	5.69	0	0	0	-9.90	0	0	0	-9.90
621	417	382	453	8.51	0	0	0	-9.90	0	0	0	-9.90
622	238	212	265	11.26	0	0	0	-9.90	0	0	0	-9.90
630	1,243	1,182	1,304	4.93	0	0	0	-9.90	0	0	0	-9.90
631	148	126	169	14.31	0	0	0	-9.90	0	0	0	-9.90
632	150	129	172	14.17	0	0	0	-9.90	0	0	0	-9.90
640	1,215	1,154	1,275	4.99	0	0	0	-9.90	0	0	0	-9.90
641	443	406	479	8.26	0	0	0	-9.90	0	0	0	-9.90
650	914	861	966	5.75	0	0	0	-9.90	0	0	0	-9.90
651	1,462	1,395	1,528	4.55	9	3	14	59.58	9	3	14	59.58
652	202	177	226	12.25	0	0	0	-9.90	0	0	0	-9.90
670	976	922	1,031	5.56	0	0	0	-9.90	0	0	0	-9.90
680	630	586	674	6.93	3	0	6	103.19	3	0	6	103.19
690	2,109	2,029	2,189	3.79	6	2	10	72.96	6	2	10	72.96
699	97	79	114	17.70	0	0	0	-9.90	0	0	0	-9.90
700	2,441	2,355	2,527	3.52	14	8	21	46.15	14	8	21	46.15
701	2,813	2,721	2,905	3.28	9	3	14	59.58	9	3	14	59.58
702	2,001	1,923	2,079	3.89	23	14	31	36.48	28	19	38	32.63
703	3,369	3,268	3,470	3.00	20	12	28	39.00	28	19	38	32.63
704	2,733	2,642	2,824	3.33	31	22	41	31.11	45	34	57	25.80
705	2,469	2,383	2,556	3.50	6	2	10	72.96	14	8	21	46.15
799	14	8	21	46.15	0	0	0	-9.90	0	0	0	-9.90
999	105	87	123	16.96	3	0	6	103.19	3	0	6	103.19

TABLE 4: ADDITIONAL LION OBSERVATION STATISTICS

September 28, 2004

page 1

Montana Fish Wildlife and Parks
 2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
 Additional Lion Observation Statistics
 Statewide and Regional

Location	Deer Hunters	Hunter Observ	District Observ	Observ Days	Lions Seen	Percent Observ	Lions/ Observ	ObsDist /Observ	ObsDays /Observ	ObsDays /ObsDist	Lions/ ObsDay	Lions/ ObsDist
State	127,100	2,251	2,339	20,969	3,321	1.77	1.48	1.04	9.32	8.97	0.16	1.42
Region 1	20,589	556	588	5,404	866	2.70	1.56	1.06	9.71	9.20	0.16	1.47
Region 2	21,750	622	641	6,105	954	2.86	1.53	1.03	9.82	9.52	0.16	1.49
Region 3	27,523	480	488	4,879	639	1.74	1.33	1.02	10.17	9.99	0.13	1.31
Region 4	26,555	312	321	2,645	477	1.18	1.53	1.03	8.47	8.25	0.18	1.49
Region 5	16,839	173	176	956	221	1.03	1.28	1.02	5.52	5.44	0.23	1.26
Region 6	12,040	20	20	91	23	0.17	1.14	1.00	4.57	4.57	0.25	1.14
Region 7	14,685	102	102	849	139	0.70	1.36	1.00	8.31	8.31	0.16	1.36
Region U	105	3	3	40	3	2.70	1.00	1.00	14.00	14.00	0.07	1.00

TABLE 4: ADDITIONAL LION OBSERVATION STATISTICS

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Additional Lion Observation Statistics
By Lion Management Area

Location	Lion Mgmt Area Name	Deer Hunters	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Lions/ Observ	ObsDays /Observ	Lions/ ObsDay
M1A	CABINET-YAAK	3,627	125	1,351	199	3.44	1.59	10.82	0.15
M1B	CLARK FORK	2,705	82	874	125	3.04	1.52	10.62	0.14
M1C	SALISH	11,345	250	2,146	366	2.20	1.47	8.59	0.17
M1D	BOB MARSHALL-MISSIONS	3,996	68	596	108	1.70	1.58	8.75	0.18
M1E	WHITEFISH	1,490	43	360	57	2.86	1.33	8.47	0.16
M1F	URBAN	968	9	77	11	0.88	1.33	9.00	0.15
M1U	REGION 1 UNKNOWN	65	0	0	0	0.00	-9.90	-9.90	-9.00
M2A	LOWER CLARK FORK	4,561	182	1,584	318	3.98	1.75	8.72	0.20
M2B	BITTERROOT	8,081	159	1,811	233	1.97	1.46	11.39	0.13
M2C	ROCK CR-DEERLODGE	3,571	71	718	105	1.99	1.48	10.12	0.15
M2D	BLACKFOOT	7,621	210	1,978	295	2.76	1.41	9.42	0.15
M2U	REGION 2 UNKNOWN	85	3	14	3	3.33	1.00	5.00	0.20
M3A	BIGHOLE	4,340	91	934	111	2.09	1.22	10.28	0.12
M3B	GRAVELLYS-PIONEERS	8,299	114	1,025	150	1.37	1.33	9.03	0.15
M3C	YELLOWSTONE	5,572	79	886	105	1.43	1.32	11.14	0.12
M3D	BELTS-BRIDGERS-ELKHORN	12,156	199	2,027	270	1.63	1.36	10.20	0.13
M3U	REGION 3 UNKNOWN	54	3	9	3	5.26	1.00	3.00	0.33
M4A	EAST FRONT	3,695	34	199	57	0.92	1.67	5.83	0.29
M4B	MOUNTAIN-FOOTHILLS	11,955	210	1,816	324	1.76	1.54	8.65	0.18
M4C	PRAIRE-AGRICULTURE	13,172	65	613	88	0.50	1.35	9.39	0.14
M4U	REGION 4 UNKNOWN	148	6	17	9	3.85	1.50	3.00	0.50
M5A	BEARTOOTH FACE	2,940	60	355	79	2.03	1.33	5.95	0.22
M5B	MOUNTAIN FOOTHILLS	3,568	43	264	57	1.19	1.33	6.20	0.22
M5C	PRAIRE-AGRICULTURE	11,364	71	338	85	0.62	1.20	4.76	0.25
M5U	REGION 5 UNKNOWN	105	0	0	0	0.00	-9.90	-9.90	-9.00
M6A	REGION 6 DISTRICTS	11,980	20	91	23	0.17	1.14	4.57	0.25
M6U	REGION 6 UNKNOWN	97	0	0	0	0.00	-9.90	-9.90	-9.00
M7A	REGION 7 DISTRICTS	14,674	102	849	139	0.70	1.36	8.31	0.16
M7U	REGION 7 UNKNOWN	14	0	0	0	0.00	-9.90	-9.90	-9.00
M9U	REGION UNKNOWN	105	3	40	3	2.70	1.00	14.00	0.07

TABLE 4: ADDITIONAL LION OBSERVATION STATISTICS

September 28, 2004

page 1

Montana Fish Wildlife and Parks
 2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
 Additional Lion Observation Statistics
 By Lion Regulations/Quota Unit

Location	Lion Regs/Quota Unit HDs	Deer Hunters	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Lions/ Observ	ObsDays /Observ	Lions/ ObsDay
R100	HD:100	2,478	94	1,002	156	3.78	1.67	10.70	0.16
R101	HD:101,109	2,702	68	463	102	2.52	1.50	6.79	0.22
R102	HD:102	3,446	54	480	74	1.57	1.37	8.89	0.15
R103	HD:103	2,466	54	627	91	2.19	1.68	11.63	0.14
R104	HD:104	1,490	34	349	43	2.29	1.25	10.25	0.12
R110	HD:110	1,490	43	360	57	2.86	1.33	8.47	0.16
R120	HD:120	2,211	40	298	57	1.80	1.43	7.50	0.19
R121	HD:121	2,046	74	781	114	3.61	1.54	10.58	0.15
R122	HD:122	1,995	43	278	43	2.13	1.00	6.53	0.15
R123	HD:123	440	3	28	3	0.65	1.00	10.00	0.10
R124	HD:124	386	6	65	9	1.47	1.50	11.50	0.13
R130	HD:130	2,251	37	335	60	1.64	1.62	9.08	0.18
R132	HD:132,170	2,171	14	91	17	0.65	1.20	6.40	0.19
R140	HD:140	605	20	227	37	3.29	1.86	11.43	0.16
R141	HD:141	145	6	20	6	3.92	1.00	3.50	0.29
R150	HD:150,151	60	0	0	0	0.00	-9.90	-9.90	-9.00
R199	HD:R1 UNKN	65	0	0	0	0.00	-9.90	-9.90	-9.00
R200	HD:200,201	2,418	65	610	85	2.70	1.30	9.35	0.14
R202	HD:202,203	2,532	119	974	233	4.71	1.95	8.17	0.24
R204	HD:204,260,261	3,914	60	826	82	1.52	1.38	13.86	0.10
R210	HD:210,211,216	1,323	31	309	51	2.36	1.64	9.91	0.17
R212	HD:212,215	1,927	34	290	40	1.77	1.17	8.50	0.14
R213	HD:213,214	596	9	119	14	1.43	1.67	14.00	0.12
R240	HD:240	2,069	28	207	45	1.37	1.60	7.30	0.22
R250	HD:250	1,320	26	139	34	1.94	1.33	5.44	0.24
R270	HD:270	2,168	51	639	71	2.36	1.39	12.50	0.11
R280	HD:280,281,284,293	2,058	45	485	68	2.21	1.50	10.69	0.14
R282	HD:282	193	6	51	9	2.94	1.50	9.00	0.17
R283	HD:283,285	3,366	85	514	111	2.53	1.30	6.03	0.22
R290	HD:290,291,292	2,679	77	928	108	2.86	1.41	12.11	0.12
R299	HD:R2 UNKN	85	3	14	3	3.33	1.00	5.00	0.20
R300	HD:300,302,328,329	1,357	17	136	20	1.26	1.17	8.00	0.15
R301	HD:301	931	11	79	14	1.22	1.25	7.00	0.18
R310	HD:310,311,360,361,362	2,943	48	596	62	1.64	1.29	12.35	0.10
R312	HD:312,393	3,128	28	270	54	0.91	1.90	9.50	0.20
R313	HD:313,316	431	6	34	11	1.32	2.00	6.00	0.33
R314	HD:314	937	6	99	6	0.61	1.00	17.50	0.06
R315	HD:315	1,927	28	326	34	1.47	1.20	11.50	0.10
R317	HD:317	763	9	77	11	1.12	1.33	9.00	0.15
R318	HD:318,350	1,044	20	213	23	1.90	1.14	10.71	0.11
R319	HD:319,341	1,113	28	216	34	2.55	1.20	7.60	0.16
R320	HD:320,333	3,238	57	485	77	1.75	1.35	8.55	0.16
R321	HD:321,331,332	1,967	37	423	43	1.88	1.15	11.46	0.10
R322	HD:322,326,330	2,642	23	258	31	0.86	1.38	11.38	0.12
R323	HD:323,324,325,327	1,655	20	145	23	1.20	1.14	7.29	0.16
R335	HD:335,339,343	2,217	37	281	45	1.66	1.23	7.62	0.16
R340	HD:340	1,456	26	295	34	1.75	1.33	11.56	0.12
R370	HD:370,380	2,557	43	500	54	1.66	1.27	11.73	0.11
R390	HD:390,391,392	2,166	43	437	60	1.97	1.40	10.27	0.14
R399	HD:R3 UNKN	54	3	9	3	5.26	1.00	3.00	0.33
R400	HD:400,401,403,406,415,441	4,337	34	284	45	0.79	1.33	8.33	0.16
R404	HD:404,421,444,450	4,039	17	74	34	0.42	2.00	4.33	0.46
R405	HD:405,447,471	3,888	20	148	23	0.51	1.14	7.43	0.15
R410	HD:410,417,419,426	3,494	23	267	37	0.65	1.63	11.75	0.14
R411	HD:411,412	4,638	82	698	111	1.77	1.34	8.48	0.16
R413	HD:413,432	2,895	54	474	88	1.86	1.63	8.79	0.19
R416	HD:416,446,449,452,454	1,941	34	247	48	1.75	1.42	7.25	0.20
R418	HD:418,420,448	1,501	23	309	43	1.51	1.88	13.62	0.14
R422	HD:422,423,424,425,442	1,643	6	40	6	0.35	1.00	7.00	0.14
R445	HD:445,455	1,632	20	88	34	1.22	1.71	4.43	0.39
R499	HD:R4 UNKN	148	6	17	9	3.85	1.50	3.00	0.50

TABLE 4: ADDITIONAL LION OBSERVATION STATISTICS

September 28, 2004

page 2

Montana Fish Wildlife and Parks
 2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
 Additional Lion Observation Statistics
 By Lion Regulations/Quota Unit

Location	Lion Regs/Quota Unit	Deer Hunters	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Lions/ Observ	ObsDays /Observ	Lions/ ObsDay
R500	HD:500,570	3,253	20	97	20	0.61	1.00	4.86	0.21
R502	HD:502,575	4,459	20	150	26	0.45	1.29	7.57	0.17
R510	HD:510	667	6	40	6	0.85	1.00	7.00	0.14
R511	HD:511	781	0	0	0	0.00	-9.90	-9.90	-9.00
R520	HD:520	1,916	31	190	37	1.63	1.18	6.09	0.19
R530	HD:530,590	4,158	31	91	40	0.75	1.27	2.91	0.44
R540	HD:540	676	11	48	14	1.68	1.25	4.25	0.29
R560	HD:560	1,044	28	165	43	2.72	1.50	5.80	0.26
R580	HD:580	1,572	28	176	37	1.81	1.30	6.20	0.21
R599	HD:R5 UNKN	105	0	0	0	0.00	-9.90	-9.90	-9.00
R600	HD:600'S (NOT 680,690)	9,783	11	51	14	0.12	1.25	4.50	0.28
R680	HD:680,690	2,600	9	40	9	0.33	1.00	4.67	0.21
R699	HD:R6 UNKN	97	0	0	0	0.00	-9.90	-9.90	-9.00
R700	HD:700'S	14,674	102	849	139	0.70	1.36	8.31	0.16
R799	HD:R7 UNKN	14	0	0	0	0.00	-9.90	-9.90	-9.00
R999	HD:REGION UNKN	105	3	40	3	2.70	1.00	14.00	0.07

TABLE 4: ADDITIONAL LION OBSERVATION STATISTICS

September 28, 2004

page 1

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Additional Lion Observation Statistics
By Deer Hunting District

Location	Deer Hunters	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Lions/ Observ	ObsDays /Observ	Lions/ ObsDay
100	2,478	94	1,002	156	3.78	1.67	10.70	0.16
101	2,347	60	434	88	2.54	1.48	7.29	0.20
102	3,446	54	480	74	1.57	1.37	8.89	0.15
103	2,466	54	627	91	2.19	1.68	11.63	0.14
104	1,490	34	349	43	2.29	1.25	10.25	0.12
109	417	9	28	14	2.04	1.67	3.33	0.50
110	1,490	43	360	57	2.86	1.33	8.47	0.16
120	2,211	40	298	57	1.80	1.43	7.50	0.19
121	2,046	74	781	114	3.61	1.54	10.58	0.15
122	1,995	43	278	43	2.13	1.00	6.53	0.15
123	440	3	28	3	0.65	1.00	10.00	0.10
124	386	6	65	9	1.47	1.50	11.50	0.13
130	2,251	37	335	60	1.64	1.62	9.08	0.18
132	1,294	6	14	6	0.44	1.00	2.50	0.40
140	605	20	227	37	3.29	1.86	11.43	0.16
141	145	6	20	6	3.92	1.00	3.50	0.29
150	57	0	0	0	0.00	-9.90	-9.90	-9.00
151	3	0	0	0	0.00	-9.90	-9.90	-9.00
170	968	9	77	11	0.88	1.33	9.00	0.15
199	65	0	0	0	0.00	-9.90	-9.90	-9.00
200	687	23	230	26	3.31	1.13	10.13	0.11
201	1,819	43	380	60	2.34	1.40	8.93	0.16
202	1,507	77	534	133	5.08	1.74	6.96	0.25
203	1,149	45	440	99	3.95	2.19	9.69	0.23
204	1,677	31	315	43	1.86	1.36	10.09	0.14
210	928	17	199	34	1.83	2.00	11.67	0.17
211	210	6	82	9	2.70	1.50	14.50	0.10
212	1,226	14	102	14	1.16	1.00	7.20	0.14
213	329	6	91	6	1.72	1.00	16.00	0.06
214	321	3	28	9	0.88	3.00	10.00	0.30
215	854	20	187	26	2.33	1.29	9.43	0.14
216	264	9	28	9	3.23	1.00	3.33	0.30
240	2,069	28	207	45	1.37	1.60	7.30	0.22
250	1,320	26	139	34	1.94	1.33	5.44	0.24
260	1,799	26	491	34	1.42	1.33	19.22	0.07
261	650	3	20	6	0.44	2.00	7.00	0.29
270	2,168	51	639	71	2.36	1.39	12.50	0.11
280	108	0	0	0	0.00	-9.90	-9.90	-9.00
281	1,084	34	403	51	3.14	1.50	11.83	0.13
282	193	6	51	9	2.94	1.50	9.00	0.17
283	1,260	28	153	34	2.25	1.20	5.40	0.22
284	179	0	0	0	0.00	-9.90	-9.90	-9.00
285	2,259	57	360	77	2.51	1.35	6.35	0.21
290	244	6	71	6	2.33	1.00	12.50	0.08
291	559	11	37	17	2.03	1.50	3.25	0.46
292	1,944	60	820	85	3.07	1.43	13.76	0.10
293	832	11	82	17	1.37	1.50	7.25	0.21
299	85	3	14	3	3.33	1.00	5.00	0.20
300	304	3	3	3	0.93	1.00	1.00	1.00
301	931	11	79	14	1.22	1.25	7.00	0.18
302	409	6	71	6	1.39	1.00	12.50	0.08
310	238	11	162	20	4.76	1.75	14.25	0.12
311	2,063	14	216	14	0.69	1.00	15.20	0.07
312	1,984	23	244	43	1.14	1.88	10.75	0.17
313	392	6	34	11	1.45	2.00	6.00	0.33
314	937	6	99	6	0.61	1.00	17.50	0.06
315	1,927	28	326	34	1.47	1.20	11.50	0.10
316	40	0	0	0	0.00	-9.90	-9.90	-9.00
317	763	9	77	11	1.12	1.33	9.00	0.15
318	505	3	28	3	0.56	1.00	10.00	0.10
319	676	20	139	20	2.94	1.00	7.00	0.14
320	1,240	26	193	40	2.06	1.56	7.56	0.21
321	395	0	0	0	0.00	-9.90	-9.90	-9.00
322	1,325	9	102	9	0.64	1.00	12.00	0.08

TABLE 4: ADDITIONAL LION OBSERVATION STATISTICS

September 28, 2004

page 2

Montana Fish Wildlife and Parks
2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
Additional Lion Observation Statistics
By Deer Hunting District

Location	Deer Hunters	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Lions/ Observ	ObsDays /Observ	Lions/ ObsDay
323	238	3	9	3	1.19	1.00	3.00	0.33
324	375	9	62	11	2.27	1.33	7.33	0.18
325	897	0	0	0	0.00	-9.90	-9.90	-9.00
326	806	6	74	11	0.70	2.00	13.00	0.15
327	187	9	74	9	4.55	1.00	8.67	0.12
328	204	0	0	0	0.00	-9.90	-9.90	-9.00
329	502	9	62	11	1.69	1.33	7.33	0.18
330	605	9	82	11	1.41	1.33	9.67	0.14
331	1,280	31	349	37	2.44	1.18	11.18	0.11
332	386	6	74	6	1.47	1.00	13.00	0.08
333	2,058	31	292	37	1.52	1.18	9.36	0.13
335	704	14	122	14	2.02	1.00	8.60	0.12
339	738	9	37	11	1.15	1.33	4.33	0.31
340	1,456	26	295	34	1.75	1.33	11.56	0.12
341	454	9	77	14	1.88	1.67	9.00	0.19
343	843	14	122	20	1.68	1.40	8.60	0.16
350	568	17	184	20	3.00	1.17	10.83	0.11
360	528	14	142	17	2.69	1.20	10.00	0.12
361	91	6	62	9	6.25	1.50	11.00	0.14
362	162	3	14	3	1.75	1.00	5.00	0.20
370	349	11	173	14	3.25	1.25	15.25	0.08
380	2,265	31	326	40	1.38	1.27	10.45	0.12
390	250	9	43	26	3.41	3.00	5.00	0.60
391	860	3	14	3	0.33	1.00	5.00	0.20
392	1,149	31	380	31	2.72	1.00	12.18	0.08
393	1,243	6	26	11	0.46	2.00	4.50	0.44
399	54	3	9	3	5.26	1.00	3.00	0.33
400	1,538	3	68	3	0.18	1.00	24.00	0.04
401	1,473	9	60	14	0.58	1.67	7.00	0.24
403	213	0	0	0	0.00	-9.90	-9.90	-9.00
404	2,586	3	11	3	0.11	1.00	4.00	0.25
405	1,096	0	0	0	0.00	-9.90	-9.90	-9.00
406	724	9	60	9	1.18	1.00	7.00	0.14
410	1,144	11	233	23	0.99	2.00	20.50	0.10
411	2,955	57	582	79	1.92	1.40	10.25	0.14
412	2,004	26	116	31	1.27	1.22	4.56	0.27
413	1,902	23	253	28	1.19	1.25	11.12	0.11
415	74	3	11	3	3.85	1.00	4.00	0.25
416	687	9	40	14	1.24	1.67	4.67	0.36
417	789	11	34	14	1.44	1.25	3.00	0.42
418	800	11	116	11	1.42	1.00	10.25	0.10
419	556	0	0	0	0.00	-9.90	-9.90	-9.00
420	150	3	28	3	1.89	1.00	10.00	0.10
421	627	11	34	28	1.81	2.50	3.00	0.83
422	463	3	28	3	0.61	1.00	10.00	0.10
423	355	0	0	0	0.00	-9.90	-9.90	-9.00
424	292	3	11	3	0.97	1.00	4.00	0.25
425	210	0	0	0	0.00	-9.90	-9.90	-9.00
426	1,203	0	0	0	0.00	-9.90	-9.90	-9.00
432	1,135	31	221	60	2.75	1.91	7.09	0.27
441	667	11	85	17	1.70	1.50	7.50	0.20
442	412	0	0	0	0.00	-9.90	-9.90	-9.00
444	497	0	0	0	0.00	-9.90	-9.90	-9.00
445	1,516	14	54	28	0.94	2.00	3.80	0.53
446	548	9	31	9	1.55	1.00	3.67	0.27
447	2,194	17	139	20	0.78	1.17	8.17	0.14
448	678	9	165	28	1.26	3.33	19.33	0.17
449	360	6	31	6	1.57	1.00	5.50	0.18
450	477	3	28	3	0.60	1.00	10.00	0.10
452	156	3	11	6	1.82	2.00	4.00	0.50
454	386	11	133	14	2.94	1.25	11.75	0.11
455	116	6	34	6	4.88	1.00	6.00	0.17
471	812	3	9	3	0.35	1.00	3.00	0.33
499	148	6	17	9	3.85	1.50	3.00	0.50

TABLE 4: ADDITIONAL LION OBSERVATION STATISTICS

September 28, 2004

page 3

Montana Fish Wildlife and Parks
 2003 Mountain Lion Sightings while Deer Hunting (MT Residents)
 Additional Lion Observation Statistics
 By Deer Hunting District

Location	Deer Hunters	Hunter Observ	Observ Days	Lions Seen	Percent Observ	Lions/ Observ	ObsDays /Observ	Lions/ ObsDay
500	1,714	6	11	6	0.33	1.00	2.00	0.50
502	1,845	9	17	9	0.46	1.00	2.00	0.50
510	667	6	40	6	0.85	1.00	7.00	0.14
511	781	0	0	0	0.00	-9.90	-9.90	-9.00
520	1,916	31	190	37	1.63	1.18	6.09	0.19
530	1,462	14	23	23	0.97	1.60	1.60	1.00
540	676	11	48	14	1.68	1.25	4.25	0.29
560	1,044	28	165	43	2.72	1.50	5.80	0.26
570	1,612	14	85	14	0.88	1.00	6.00	0.17
575	2,787	11	133	17	0.41	1.50	11.75	0.13
580	1,572	28	176	37	1.81	1.30	6.20	0.21
590	2,830	17	68	17	0.60	1.00	4.00	0.25
599	105	0	0	0	0.00	-9.90	-9.90	-9.00
600	1,294	3	3	6	0.22	2.00	1.00	2.00
610	729	0	0	0	0.00	-9.90	-9.90	-9.00
611	568	0	0	0	0.00	-9.90	-9.90	-9.00
620	934	0	0	0	0.00	-9.90	-9.90	-9.00
621	417	0	0	0	0.00	-9.90	-9.90	-9.00
622	238	0	0	0	0.00	-9.90	-9.90	-9.00
630	1,243	0	0	0	0.00	-9.90	-9.90	-9.00
631	148	0	0	0	0.00	-9.90	-9.90	-9.00
632	150	0	0	0	0.00	-9.90	-9.90	-9.00
640	1,215	0	0	0	0.00	-9.90	-9.90	-9.00
641	443	0	0	0	0.00	-9.90	-9.90	-9.00
650	914	0	0	0	0.00	-9.90	-9.90	-9.00
651	1,462	9	48	9	0.58	1.00	5.67	0.18
652	202	0	0	0	0.00	-9.90	-9.90	-9.00
670	976	0	0	0	0.00	-9.90	-9.90	-9.00
680	630	3	6	3	0.45	1.00	2.00	0.50
690	2,109	6	34	6	0.27	1.00	6.00	0.17
699	97	0	0	0	0.00	-9.90	-9.90	-9.00
700	2,441	14	148	14	0.58	1.00	10.40	0.10
701	2,813	9	133	9	0.30	1.00	15.67	0.06
702	2,001	23	199	28	1.13	1.25	8.75	0.14
703	3,369	20	148	28	0.59	1.43	7.43	0.19
704	2,733	31	184	45	1.14	1.45	5.91	0.25
705	2,469	6	37	14	0.23	2.50	6.50	0.38
799	14	0	0	0	0.00	-9.90	-9.90	-9.00
999	105	3	40	3	2.70	1.00	14.00	0.07

Appendix A

**2003 Mountain Lion
Management Areas, Regulations/Quota Units,
and Hunting Districts**

MANAGEMENT AREAS, REGULATIONS/QUOTA UNITS, HUNTING DISTRICTS

September 28, 2004

page 1

2003 Mountain Lion Hunting Districts Table, Sorted by Region-MgmtArea

Region	Mgmt Area	Mgmt Area Name	Hunting District	Regs Unit	Regs Unit Name
1	M1A	CABINET-YAAK	100	R100	HD:100
			104	R104	HD:104
	M1B	CLARK FORK	121	R121	HD:121
			123	R123	HD:123
			124	R124	HD:124
	M1C	SALISH	101	R101	HD:101,109
			102	R102	HD:102
			103	R103	HD:103
			109	R101	HD:101,109
			120	R120	HD:120
			122	R122	HD:122
	M1D	BOB MARSHALL-MISSIONS	130	R130	HD:130
			132	R132	HD:132,170
			140	R140	HD:140
			141	R141	HD:141
			150	R150	HD:150,151
			151	R150	HD:150,151
	M1E	WHITEFISH	110	R110	HD:110
	M1F	URBAN	170	R132	HD:132,170
	M1U	REGION 1 UNKNOWN	199	R199	HD:R1 UNKN
2	M2A	LOWER CLARK FORK	200	R200	HD:200,201
			201	R200	HD:200,201
			202	R202	HD:202,203
			203	R202	HD:202,203
	M2B	BITTERROOT	204	R204	HD:204,260,261
			240	R240	HD:240
			250	R250	HD:250
			260	R204	HD:204,260,261
			261	R204	HD:204,260,261
			270	R270	HD:270
	M2C	ROCK CR-DEERLODGE	210	R210	HD:210,211,216
			211	R210	HD:210,211,216
			212	R212	HD:212,215
			213	R213	HD:213,214
			214	R213	HD:213,214
			215	R212	HD:212,215
			216	R210	HD:210,211,216
	M2D	BLACKFOOT	280	R280	HD:280,281,284,293
			281	R280	HD:280,281,284,293
			282	R282	HD:282
			283	R283	HD:283,285
			284	R280	HD:280,281,284,293
			285	R283	HD:283,285
			290	R290	HD:290,291,292
			291	R290	HD:290,291,292
			292	R290	HD:290,291,292
			293	R280	HD:280,281,284,293
	M2M	MSLA SPECIAL MGMT AREA	801	R200	HD:200,201
			803	R202	HD:202,203
			804	R204	HD:204,260,261
			860	R204	HD:204,260,261
			883	R283	HD:283,285
	M2M	MSLA SPECIAL MGMT AREA	892	R290	HD:290,291,292
	M2U	REGION 2 UNKNOWN	299	R299	HD:R2 UNKN

MANAGEMENT AREAS, REGULATIONS/QUOTA UNITS, HUNTING DISTRICTS

September 28, 2004

page 2

2003 Mountain Lion Hunting Districts Table, Sorted by Region-MgmtArea

Region	Mgmt Area	Mgmt Area Name	Hunting District	Regs Unit	Regs Unit Name
3	M3A	BIGHOLE	319	R319	HD:319,341
			321	R321	HD:321,331,332
			331	R321	HD:321,331,332
			332	R321	HD:321,331,332
			340	R340	HD:340
			341	R319	HD:319,341
	M3B	GRAVELLYS-PIONEERS	300	R300	HD:300,302,328,329
			302	R300	HD:300,302,328,329
			320	R320	HD:320,333
			322	R322	HD:322,326,330
			323	R323	HD:323,324,325,327
			324	R323	HD:323,324,325,327
			325	R323	HD:323,324,325,327
			326	R322	HD:322,326,330
			327	R323	HD:323,324,325,327
			328	R300	HD:300,302,328,329
			329	R300	HD:300,302,328,329
			330	R322	HD:322,326,330
			333	R320	HD:320,333
	M3C	YELLOWSTONE	301	R301	HD:301
			310	R310	HD:310,311,360,361,362
			311	R310	HD:310,311,360,361,362
			313	R313	HD:313,316
			314	R314	HD:314
			316	R313	HD:313,316
			317	R317	HD:317
			360	R310	HD:310,311,360,361,362
			361	R310	HD:310,311,360,361,362
			362	R310	HD:310,311,360,361,362
	M3D	BELTS-BRIDGERS-ELKHORNS	312	R312	HD:312,393
			315	R315	HD:315
			318	R318	HD:318,350
			335	R335	HD:335,339,343
			339	R335	HD:335,339,343
			343	R335	HD:335,339,343
			350	R318	HD:318,350
			370	R370	HD:370,380
			380	R370	HD:370,380
			390	R390	HD:390,391,392
			391	R390	HD:390,391,392
			392	R390	HD:390,391,392
			393	R312	HD:312,393
	M3U	REGION 3 UNKNOWN	399	R399	HD:R3 UNKN
4	M4A	EAST FRONT	415	R400	HD:400,401,403,406,415,441
			421	R404	HD:404,421,444,450
			422	R422	HD:422,423,424,425,442
			423	R422	HD:422,423,424,425,442
			424	R422	HD:422,423,424,425,442
			425	R422	HD:422,423,424,425,442
			441	R400	HD:400,401,403,406,415,441
			442	R422	HD:422,423,424,425,442
			444	R404	HD:404,421,444,450
			450	R404	HD:404,421,444,450

MANAGEMENT AREAS, REGULATIONS/QUOTA UNITS, HUNTING DISTRICTS

September 28, 2004

page 3

2003 Mountain Lion Hunting Districts Table, Sorted by Region-MgmtArea

Region	Mgmt Area	Mgmt Area Name	Hunting District	Regs Unit	Regs Unit Name
4	M4B	MOUNTAIN-FOOTHILLS	411	R411	HD:411,412
			412	R411	HD:411,412
			413	R413	HD:413,432
			416	R416	HD:416,446,449,452,454
			418	R418	HD:418,420,448
			420	R418	HD:418,420,448
			432	R413	HD:413,432
			445	R445	HD:445,455
			446	R416	HD:416,446,449,452,454
			448	R418	HD:418,420,448
			449	R416	HD:416,446,449,452,454
			452	R416	HD:416,446,449,452,454
			454	R416	HD:416,446,449,452,454
			455	R445	HD:445,455
	M4C	PRAIRE-AGRICULTURE	400	R400	HD:400,401,403,406,415,441
			401	R400	HD:400,401,403,406,415,441
			403	R400	HD:400,401,403,406,415,441
			404	R404	HD:404,421,444,450
			405	R405	HD:405,447,471
			406	R400	HD:400,401,403,406,415,441
			410	R410	HD:410,417,419,426
			417	R410	HD:410,417,419,426
			419	R410	HD:410,417,419,426
			426	R410	HD:410,417,419,426
			447	R405	HD:405,447,471
			471	R405	HD:405,447,471
	M4U	REGION 4 UNKNOWN	499	R499	HD:R4 UNKN
5	M5A	BEARTOOTH FACE	520	R520	HD:520
			560	R560	HD:560
	M5B	MOUNTAIN FOOTHILLS	510	R510	HD:510
			511	R511	HD:511
			540	R540	HD:540
			580	R580	HD:580
	M5C	PRAIRE-AGRICULTURE	500	R500	HD:500,570
			502	R502	HD:502,575
			530	R530	HD:530,590
			570	R500	HD:500,570
			575	R502	HD:502,575
			590	R530	HD:530,590
	M5U	REGION 5 UNKNOWN	599	R599	HD:R5 UNKN
6	M6A	REGION 6 DISTRICTS	600	R600	HD:600'S (NOT 680,690)
			610	R600	HD:600'S (NOT 680,690)
			611	R600	HD:600'S (NOT 680,690)
			620	R600	HD:600'S (NOT 680,690)
			621	R600	HD:600'S (NOT 680,690)
			622	R600	HD:600'S (NOT 680,690)
			630	R600	HD:600'S (NOT 680,690)
			631	R600	HD:600'S (NOT 680,690)
			632	R600	HD:600'S (NOT 680,690)
			640	R600	HD:600'S (NOT 680,690)
			641	R600	HD:600'S (NOT 680,690)
			650	R600	HD:600'S (NOT 680,690)
			651	R600	HD:600'S (NOT 680,690)
			652	R600	HD:600'S (NOT 680,690)
			670	R600	HD:600'S (NOT 680,690)
			680	R680	HD:680,690
			690	R680	HD:680,690
	M6U	REGION 6 UNKNOWN	699	R699	HD:R6 UNKN

MANAGEMENT AREAS, REGULATIONS/QUOTA UNITS, HUNTING DISTRICTS

September 28, 2004

page 4

2003 Mountain Lion Hunting Districts Table, Sorted by Region-MgmtArea

Region	Mgmt Area	Mgmt Area Name	Hunting District	Regs Unit	Regs Unit Name
7	M7A	REGION 7 DISTRICTS	700	R700	HD:700'S
			701	R700	HD:700'S
			702	R700	HD:700'S
			703	R700	HD:700'S
			704	R700	HD:700'S
			705	R700	HD:700'S
	M7U	REGION 7 UNKNOWN	799	R799	HD:R7 UNKN
9	M9U	REGION UNKNOWN	999	R999	HD:REGION UNKN

Appendix B

2003 Mountain Lion Sightings Survey Response Data Non-Expanded Summary Statistics

**State and Regional
By Lion Management Area
By Lion Regulations/Quota Unit
By Hunting District**

RESPONSE DATA NON-EXPANDED SUMMARY STATISTICS

September 28, 2004

page 1

2003 Deer Hunter-Mountain Lion Sighting Survey Response Data Summary Non-expanded Statistics

Location	Responding Hunters	District Hunted	Hunter Days	Hunter Observ	District Observ	Observ Days	Lions Seen	Percent Observ
STA	44,781	59,357	313,444	793	824	7,388	1,170	1.77
R01	7,254	9,372	58,730	196	207	1,904	305	2.70
R02	7,663	9,775	63,993	219	226	2,151	336	2.86
R03	9,697	11,769	65,714	169	172	1,719	225	1.74
R04	9,356	11,258	48,507	110	113	932	168	1.18
R05	5,933	6,708	26,607	61	62	337	78	1.03
R06	4,242	4,856	22,848	7	7	32	8	0.17
R07	5,174	5,582	26,931	36	36	299	49	0.70
R09	37	37	114	1	1	14	1	2.70
M1A	1,278	1,398	10,091	44	45	476	70	3.44
M1B	953	1,012	8,290	29	29	308	44	3.04
M1C	3,997	4,539	27,040	88	91	756	129	2.20
M1D	1,408	1,534	8,294	24	24	210	38	1.70
M1E	525	525	2,860	15	15	127	20	2.86
M1F	341	341	1,990	3	3	27	4	0.88
M1U	23	23	165	0	0	0	0	0.00
M2A	1,607	1,819	11,648	64	66	558	112	3.98
M2B	2,847	3,414	24,313	56	58	638	82	1.97
M2C	1,258	1,456	9,366	25	26	253	37	1.99
M2D	2,685	3,055	18,486	74	75	697	104	2.76
M2U	30	31	180	1	1	5	1	3.33
M3A	1,529	1,639	10,736	32	32	329	39	2.09
M3B	2,924	3,226	16,209	40	41	361	53	1.37
M3C	1,963	2,167	10,912	28	28	312	37	1.43
M3D	4,283	4,718	27,768	70	70	714	95	1.63
M3U	19	19	89	1	1	3	1	5.26
M4A	1,302	1,436	6,119	12	12	70	20	0.92
M4B	4,212	4,722	21,164	74	76	640	114	1.76
M4C	4,641	5,048	21,062	23	23	216	31	0.50
M4U	52	52	162	2	2	6	3	3.85
M5A	1,036	1,047	4,207	21	21	125	28	2.03
M5B	1,257	1,302	5,252	15	16	93	20	1.19
M5C	4,004	4,321	17,016	25	25	119	30	0.62
M5U	37	38	132	0	0	0	0	0.00
M6A	4,221	4,821	22,675	7	7	32	8	0.17
M6U	34	35	173	0	0	0	0	0.00
M7A	5,170	5,577	26,900	36	36	299	49	0.70
M7U	5	5	31	0	0	0	0	0.00
M9U	37	37	114	1	1	14	1	2.70
R100	873	873	6,280	33	33	353	55	3.78
R101	952	974	6,164	24	24	163	36	2.52
R102	1,214	1,214	6,905	19	19	169	26	1.57
R103	869	869	5,180	19	19	221	32	2.19
R104	525	525	3,811	12	12	123	15	2.29
R110	525	525	2,860	15	15	127	20	2.86
R120	779	779	4,177	14	14	105	20	1.80
R121	721	721	5,944	26	26	275	40	3.61
R122	703	703	4,614	15	15	98	15	2.13
R123	155	155	1,140	1	1	10	1	0.65
R124	136	136	1,206	2	2	23	3	1.47
R130	793	793	3,903	13	13	118	21	1.64
R132	765	797	4,863	5	5	32	6	0.65
R140	213	213	1,187	7	7	80	13	3.29
R141	51	51	243	2	2	7	2	3.92
R150	21	21	88	0	0	0	0	0.00
R199	23	23	165	0	0	0	0	0.00

RESPONSE DATA NON-EXPANDED SUMMARY STATISTICS

September 28, 2004

page 2

2003 Deer Hunter-Mountain Lion Sighting Survey Response Data Summary Non-expanded Statistics

Location	Responding Hunters	District Hunted	Hunter Days	Hunter Observ	District Observ	Observ Days	Lions Seen	Percent Observ
R200	852	883	5,776	23	23	215	30	2.70
R202	892	936	5,872	42	43	343	82	4.71
R204	1,379	1,456	11,324	21	21	291	29	1.52
R210	466	494	3,080	11	11	109	18	2.36
R212	679	733	4,768	12	12	102	14	1.77
R213	210	229	1,518	3	3	42	5	1.43
R240	729	729	4,727	10	10	73	16	1.37
R250	465	465	3,276	9	9	49	12	1.94
R270	764	764	4,986	18	18	225	25	2.36
R280	725	777	4,772	16	16	171	24	2.21
R282	68	68	315	2	2	18	3	2.94
R283	1,186	1,241	7,069	30	30	181	39	2.53
R290	944	969	6,330	27	27	327	38	2.86
R299	30	31	180	1	1	5	1	3.33
R300	478	500	2,443	6	6	48	7	1.26
R301	328	328	1,681	4	4	28	5	1.22
R310	1,037	1,087	5,933	17	17	210	22	1.64
R312	1,102	1,138	6,226	10	10	95	19	0.91
R313	152	152	590	2	2	12	4	1.32
R314	330	331	1,448	2	2	35	2	0.61
R315	679	679	3,116	10	10	115	12	1.47
R317	269	269	1,260	3	3	27	4	1.12
R318	368	378	2,716	7	7	75	8	1.90
R319	392	399	3,161	10	10	76	12	2.55
R320	1,141	1,162	5,929	20	20	171	27	1.75
R321	693	726	4,585	13	13	149	15	1.88
R322	931	965	4,466	8	8	91	11	0.86
R323	583	599	3,371	7	7	51	8	1.20
R335	781	805	5,114	13	13	99	16	1.66
R340	513	514	2,990	9	9	104	12	1.75
R370	901	922	5,382	15	15	176	19	1.66
R390	763	796	5,214	15	15	154	21	1.97
R399	19	19	89	1	1	3	1	5.26
R400	1,528	1,652	7,054	12	12	100	16	0.79
R404	1,423	1,475	6,115	6	6	26	12	0.42
R405	1,370	1,445	5,787	7	7	52	8	0.51
R410	1,231	1,301	5,624	8	8	94	13	0.65
R411	1,634	1,749	7,783	29	29	246	39	1.77
R413	1,020	1,070	4,703	19	19	167	31	1.86
R416	684	753	3,715	12	13	87	17	1.75
R418	529	574	2,807	8	8	109	15	1.51
R422	579	611	2,601	2	2	14	2	0.35
R445	575	576	2,156	7	7	31	12	1.22
R499	52	52	162	2	2	6	3	3.85
R500	1,146	1,175	4,049	7	7	34	7	0.61
R502	1,571	1,634	6,289	7	7	53	9	0.45
R510	235	235	1,217	2	2	14	2	0.85
R511	275	275	1,081	0	0	0	0	0.00
R520	675	676	2,868	11	11	67	13	1.63
R530	1,465	1,512	6,678	11	11	32	14	0.75
R540	238	238	1,088	4	4	17	5	1.68
R560	368	371	1,339	10	10	58	15	2.72
R580	554	554	1,866	10	10	62	13	1.81
R599	37	38	132	0	0	0	0	0.00
R600	3,447	3,855	18,455	4	4	18	5	0.12
R680	916	966	4,220	3	3	14	3	0.33
R699	34	35	173	0	0	0	0	0.00
R700	5,170	5,577	26,900	36	36	299	49	0.70
R799	5	5	31	0	0	0	0	0.00
R999	37	37	114	1	1	14	1	2.70

RESPONSE DATA NON-EXPANDED SUMMARY STATISTICS

September 28, 2004

page 3

2003 Deer Hunter-Mountain Lion Sighting Survey Response Data Summary Non-expanded Statistics

Location	Responding Hunters	District Hunted	Hunter Days	Hunter Observ	District Observ	Observ Days	Lions Seen	Percent Observ
100	873	873	6,280	33	33	353	55	3.78
101	827	827	5,359	21	21	153	31	2.54
102	1,214	1,214	6,905	19	19	169	26	1.57
103	869	869	5,180	19	19	221	32	2.19
104	525	525	3,811	12	12	123	15	2.29
109	147	147	805	3	3	10	5	2.04
110	525	525	2,860	15	15	127	20	2.86
120	779	779	4,177	14	14	105	20	1.80
121	721	721	5,944	26	26	275	40	3.61
122	703	703	4,614	15	15	98	15	2.13
123	155	155	1,140	1	1	10	1	0.65
124	136	136	1,206	2	2	23	3	1.47
130	793	793	3,903	13	13	118	21	1.64
132	456	456	2,873	2	2	5	2	0.44
140	213	213	1,187	7	7	80	13	3.29
141	51	51	243	2	2	7	2	3.92
150	20	20	86	0	0	0	0	0.00
151	1	1	2	0	0	0	0	0.00
170	341	341	1,990	3	3	27	4	0.88
199	23	23	165	0	0	0	0	0.00
200	242	242	1,662	8	8	81	9	3.31
201	641	641	4,114	15	15	134	21	2.34
202	531	531	3,406	27	27	188	47	5.08
203	405	405	2,466	16	16	155	35	3.95
204	591	592	3,497	11	11	111	15	1.86
210	327	327	2,032	6	6	70	12	1.83
211	74	74	458	2	2	29	3	2.70
212	432	432	2,742	5	5	36	5	1.16
213	116	116	808	2	2	32	2	1.72
214	113	113	710	1	1	10	3	0.88
215	301	301	2,026	7	7	66	9	2.33
216	93	93	590	3	3	10	3	3.23
240	729	729	4,727	10	10	73	16	1.37
250	465	465	3,276	9	9	49	12	1.94
260	634	635	6,430	9	9	173	12	1.42
261	229	229	1,397	1	1	7	2	0.44
270	764	764	4,986	18	18	225	25	2.36
280	38	38	239	0	0	0	0	0.00
281	382	382	2,301	12	12	142	18	3.14
282	68	68	315	2	2	18	3	2.94
283	444	445	2,352	10	10	54	12	2.25
284	63	63	422	0	0	0	0	0.00
285	796	796	4,717	20	20	127	27	2.51
290	86	86	916	2	2	25	2	2.33
291	197	198	1,144	4	4	13	6	2.03
292	685	685	4,270	21	21	289	30	3.07
293	293	294	1,810	4	4	29	6	1.37
299	30	31	180	1	1	5	1	3.33
300	107	107	517	1	1	1	1	0.93
301	328	328	1,681	4	4	28	5	1.22
302	144	144	721	2	2	25	2	1.39
310	84	84	482	4	4	57	7	4.76
311	727	728	3,973	5	5	76	5	0.69
312	699	700	3,996	8	8	86	15	1.14
313	138	138	551	2	2	12	4	1.45
314	330	331	1,448	2	2	35	2	0.61
315	679	679	3,116	10	10	115	12	1.47
316	14	14	39	0	0	0	0	0.00
317	269	269	1,260	3	3	27	4	1.12
318	178	178	1,293	1	1	10	1	0.56
319	238	239	1,847	7	7	49	7	2.94
320	437	437	2,446	9	9	68	14	2.06
321	139	139	872	0	0	0	0	0.00
322	467	468	1,951	3	3	36	3	0.64
323	84	84	456	1	1	3	1	1.19
324	132	132	790	3	3	22	4	2.27

RESPONSE DATA NON-EXPANDED SUMMARY STATISTICS

September 28, 2004

page 4

2003 Deer Hunter-Mountain Lion Sighting Survey Response Data Summary Non-expanded Statistics

Location	Responding Hunters	District Hunted	Hunter Days	Hunter Observ	District Observ	Observ Days	Lions Seen	Percent Observ
325	316	317	1,720	0	0	0	0	0.00
326	284	284	1,434	2	2	26	4	0.70
327	66	66	405	3	3	26	3	4.55
328	72	72	330	0	0	0	0	0.00
329	177	177	875	3	3	22	4	1.69
330	213	213	1,081	3	3	29	4	1.41
331	451	451	2,971	11	11	123	13	2.44
332	136	136	742	2	2	26	2	1.47
333	725	725	3,483	11	11	103	13	1.52
335	248	248	1,568	5	5	43	5	2.02
339	260	260	1,502	3	3	13	4	1.15
340	513	514	2,990	9	9	104	12	1.75
341	160	160	1,314	3	3	27	5	1.88
343	297	297	2,044	5	5	43	7	1.68
350	200	200	1,423	6	6	65	7	3.00
360	186	186	912	5	5	50	6	2.69
361	32	32	251	2	2	22	3	6.25
362	57	57	315	1	1	5	1	1.75
370	123	124	666	4	4	61	5	3.25
380	798	798	4,716	11	11	115	14	1.38
390	88	88	492	3	3	15	9	3.41
391	303	303	1,854	1	1	5	1	0.33
392	405	405	2,868	11	11	134	11	2.72
393	438	438	2,230	2	2	9	4	0.46
399	19	19	89	1	1	3	1	5.26
400	542	542	2,344	1	1	24	1	0.18
401	519	519	2,106	3	3	21	5	0.58
403	75	75	268	0	0	0	0	0.00
404	911	911	3,873	1	1	4	1	0.11
405	386	386	1,261	0	0	0	0	0.00
406	255	255	1,060	3	3	21	3	1.18
410	403	403	2,126	4	4	82	8	0.99
411	1,041	1,043	4,819	20	20	205	28	1.92
412	706	706	2,964	9	9	41	11	1.27
413	670	670	2,944	8	8	89	10	1.19
415	26	26	124	1	1	4	1	3.85
416	242	242	1,297	3	3	14	5	1.24
417	278	278	1,222	4	4	12	5	1.44
418	282	282	1,339	4	4	41	4	1.42
419	196	196	613	0	0	0	0	0.00
420	53	53	222	1	1	10	1	1.89
421	221	221	857	4	4	12	10	1.81
422	163	164	610	1	1	10	1	0.61
423	125	125	483	0	0	0	0	0.00
424	103	103	516	1	1	4	1	0.97
425	74	74	286	0	0	0	0	0.00
426	424	424	1,663	0	0	0	0	0.00
432	400	400	1,759	11	11	78	21	2.75
441	235	235	1,152	4	4	30	6	1.70
442	145	145	706	0	0	0	0	0.00
444	175	175	610	0	0	0	0	0.00
445	534	535	1,994	5	5	19	10	0.94
446	193	193	1,003	3	3	11	3	1.55
447	773	773	3,465	6	6	49	7	0.78
448	239	239	1,246	3	3	58	10	1.26
449	127	127	516	2	2	11	2	1.57
450	168	168	775	1	1	10	1	0.60
452	55	55	191	1	1	4	2	1.82
454	136	136	708	4	4	47	5	2.94
455	41	41	162	2	2	12	2	4.88
471	286	286	1,061	1	1	3	1	0.35
499	52	52	162	2	2	6	3	3.85

RESPONSE DATA NON-EXPANDED SUMMARY STATISTICS

September 28, 2004

page 5

2003 Deer Hunter-Mountain Lion Sighting Survey Response Data Summary Non-expanded Statistics

Location	Responding Hunters	District Hunted	Hunter Days	Hunter Observ	District Observ	Observ Days	Lions Seen	Percent Observ
500	604	606	2,252	2	2	4	2	0.33
502	650	650	2,491	3	3	6	3	0.46
510	235	235	1,217	2	2	14	2	0.85
511	275	275	1,081	0	0	0	0	0.00
520	675	676	2,868	11	11	67	13	1.63
530	515	515	2,032	5	5	8	8	0.97
540	238	238	1,088	4	4	17	5	1.68
560	368	371	1,339	10	10	58	15	2.72
570	568	569	1,797	5	5	30	5	0.88
575	982	984	3,798	4	4	47	6	0.41
580	554	554	1,866	10	10	62	13	1.81
590	997	997	4,646	6	6	24	6	0.60
599	37	38	132	0	0	0	0	0.00
600	456	456	1,986	1	1	1	2	0.22
610	257	257	1,058	0	0	0	0	0.00
611	200	200	793	0	0	0	0	0.00
620	329	331	1,447	0	0	0	0	0.00
621	147	147	733	0	0	0	0	0.00
622	84	84	445	0	0	0	0	0.00
630	438	439	2,245	0	0	0	0	0.00
631	52	52	305	0	0	0	0	0.00
632	53	53	220	0	0	0	0	0.00
640	428	428	2,266	0	0	0	0	0.00
641	156	156	946	0	0	0	0	0.00
650	322	322	1,417	0	0	0	0	0.00
651	515	515	2,858	3	3	17	3	0.58
652	71	71	254	0	0	0	0	0.00
670	344	344	1,482	0	0	0	0	0.00
680	222	222	911	1	1	2	1	0.45
690	743	744	3,309	2	2	12	2	0.27
699	34	35	173	0	0	0	0	0.00
700	860	860	4,018	5	5	52	5	0.58
701	991	991	4,203	3	3	47	3	0.30
702	705	705	3,336	8	8	70	10	1.13
703	1,187	1,188	6,657	7	7	52	10	0.59
704	963	963	4,480	11	11	65	16	1.14
705	870	870	4,206	2	2	13	5	0.23
799	5	5	31	0	0	0	0	0.00
999	37	37	114	1	1	14	1	2.70

Appendix C

2003 Mountain Lion Sightings Statistical Estimates Data File Description

Mountain Lion Sightings While Deer Hunting

Description of Data File of Statistical Estimates

License Year 2003

Montana Fish Wildlife and Parks

Harvest Surveys

September 28, 2004

This document contains a description of the License Year 2003 “Mountain Lion Sightings While Deer Hunting” data file of expanded statistical estimates. This file was exported from the original Oracle data tables used to produce the **2003 Mountain Lion Sightings Report**. An additional data file defines Mountain Lion Management Areas and Regulation/Quota Units by Hunting District. The data sets are available as **Comma Separated Value ASCII text files** compressed into a WinZip file. Character values are quoted and numeric values are not. Numeric values were exported to 3 decimal places. Undefined or otherwise null numeric values are flagged as -9.9. Column headers are not included. The data files have the extension *.Csv. They are accompanied by *.sch files which further define the file format and column types. This documentation appears as Appendix C of the 2003 report, and as a stand alone Rich Text Format (rtf) document distributed with the data set (**2003MLionObsStatsData.Rtf**). Descriptions and column definitions for the data file are given below. See the full report for further information and explanations of the analysis methods used to produce the statistical estimates.

DmHu03_040928.Csv – LY2003 Table of Lion Sightings by Deer Hunters Statistics (generated 9/28/2004)

- **Loc (Location):** STA=Statewide; R01..R07,R09=Regional 1..7,Unknown; M1A..M9U=Management Area; R100..R900=Regs/Quota Unit; ###=Hunting District (100,101,...), #99=Unknown District within Region. 999=Unknown District and Region. (See included **DmHDist03.Csv** table for Lion Districts, Mgmt Areas, and Regs/Quota Units.)
- **Sort_Loc:** Variable which assists in sorting the records by Location.
- **Exp_Fact (Expansion Factor):** Number by which survey response summary statistics were expanded to statistical estimates. Number of resident active deer hunters divided by number of valid responses used in analysis from resident active deer hunters.
- **Hunt (Hunters):** Point estimate of number of resident sportspersons actively hunting deer.
- **Hunt_L (Hunters Lower Bound):** Lower 80% confidence bound on active deer hunters.
- **Hunt_U (Hunters Upper Bound):** Upper 80% confidence bound on active deer hunters.
- **DistHunt (Districts Hunted):** Sum of number of districts reported used by all active deer hunters.
- **HDays (Hunter Days):** Sum of number of days or partial days spent hunting deer by all hunters.
- **HDays_L (Hunter Days Lower Bound):** Lower 80% confidence bound on hunter days.
- **HDays_U (Hunter Days Upper Bound):** Upper 80% confidence bound on hunter days.
- **Obs (Lion Observers):** Point estimate of number of resident active deer hunters observing a lion.
- **Obs_L (Obs Lower Bound):** Lower 80% confidence bound on lion observers.
- **Obs_U (Obs Upper Bound):** Upper 80% confidence bound on lion observers.
- **ODays (Observation Days):** Sum of deer hunter days for hunts where lion was observed.
- **ODays_L (ODays Lower Bound):** Lower 80% confidence bound on observation days.
- **ODays_U (ODays Upper Bound):** Upper 80% confidence bound on observation days.
- **ObsN (Lions Seen):** Point estimate of number of lion seen by lion observers.
- **ObsN_L (ObsN Lower Bound):** Lower 80% confidence bound on lions seen.
- **ObsN_U (ObsN Upper Bound):** Upper 80% confidence bound on lions seen.

- **PctObs (Percent Observers):** Percent of resident active deer hunters observing a lion.

Various meaningful ratios and percents further describing mountain lion sightings by deer hunters can be computed based on these provided statistics. Please refer to the **2003 Mountain Lion Sightings Report** for definitions of these ratios and percents and examples of their use.

DmHDist03.Csv – LY2003 Table of Lion Hunting Districts, Regions, Management Areas, & Regulations Units

- **HDist:** Mountain Lion Hunting District. Same as Deer Hunting District.
- **Region:** FWP Administrative Region of District.
- **MgmtArea:** Mountain Lion Management Area of District.
- **MgmtArea_Name:** Descriptive name of Mountain Lion Management Area.
- **RegsUnit:** Mountain Lion Regulations/Quota Unit of District.
- **MgmtArea_Name:** Descriptive name of Mountain Lion Regulations/Quota Unit.

2003 DEER

Our records show that you were issued a license to hunt deer in Montana in 2003. The license(s) issued are shown on the address label below. Please record **ALL** of your **OWN** deer rifle and archery hunting activity in Montana, regardless of your license type, during the past 2003 deer hunting season (Sept. 1, 2003 - Feb. 28, 2004). The information you provide will be used for management purposes. Thank you!

PLEASE COMPLETE ALL SECTIONS THAT APPLY IN INK

1. Did you HUNT DEER in Montana in 2003?.....☐¹NO ☐²YES
2. List up to 3 hunting districts hunted most for deer and total days hunted in each; for all of your own deer rifle and archery hunting activity. (see map for 3 digit hunting district numbers).....

Hunting District Number	No. Days

3. How many deer did you kill in the 2003 Montana deer hunting season?

Please complete the following sections for each deer killed (up to three) during license year 2003.

DEER NO. 1

4. In which hunting district did you kill this deer in 2003?.....
5. Deer killed was a:.....☐¹MULE DEER ☐²WHITE-TAILED DEER
6. Deer killed was a:.....☐¹FAWN ☐²ADULT DOE ☐³ADULT BUCK
7. a) If a Buck, was the total antler length: ☐¹LESS THAN 4 inches ☐²MORE THAN 4 inches
- b) If total antler length is more than 4 inches, how many POINTS ON EACH SIDE?.....
(Antler points are antler points 1 inch long or longer.)
- Mule Deer: Do NOT include Brow-tines as antler points
White-tail Deer: Include Brow-tines as antler points
8. Deer was killed during which time period? ☐¹Before Oct 26
- ☐²Oct 26 - Nov 2 (First week) ☐³Nov 3 - Nov 9 (Second week) ☐⁴Nov 10 - 16 (Third week) ☐⁵Nov 17 - 23 (Fourth week) ☐⁶Nov 24 - Nov 30 (Fifth week) ☐⁷After Nov 30
9. Please describe the specific location of kill (geographic landmark and/or Block Management Area) if the kill was made in any of the following hunting districts: 100, 292, 312, 326, 405, 418, 530, 575, 670, 690, 701, 704:

HUNTING DISTRICT

Antler Points

X

(Side 1)(Side 2)

DEER NO. 2

4. In which hunting district did you kill this deer in 2003?.....
5. Deer killed was a:.....☐¹MULE DEER ☐²WHITE-TAILED DEER
6. Deer killed was a:.....☐¹FAWN ☐²ADULT DOE ☐³ADULT BUCK
7. a) If a Buck, was the total antler length: ☐¹LESS THAN 4 inches ☐²MORE THAN 4 inches
- b) If total antler length is more than 4 inches, how many POINTS ON EACH SIDE?.....
(Antler points are antler points 1 inch long or longer.)
- Mule Deer: Do NOT include Brow-tines as antler points
White-tail Deer: Include Brow-tines as antler points
8. Deer was killed during which time period? ☐¹Before Oct 26
- ☐²Oct 26 - Nov 2 (First week) ☐³Nov 3 - Nov 9 (Second week) ☐⁴Nov 10 - 16 (Third week) ☐⁵Nov 17 - 23 (Fourth week) ☐⁶Nov 24 - Nov 30 (Fifth week) ☐⁷After Nov 30
9. Please describe the specific location of kill (geographic landmark and/or Block Management Area) if the kill was made in any of the following hunting districts: 100, 292, 312, 326, 405, 418, 530, 575, 670, 690, 701, 704:

HUNTING DISTRICT

Antler Points

X

(Side 1)(Side 2)

DEER NO. 3

4. In which hunting district did you kill this deer in 2003?.....
5. Deer killed was a:.....☐¹MULE DEER ☐²WHITE-TAILED DEER
6. Deer killed was a:.....☐¹FAWN ☐²ADULT DOE ☐³ADULT BUCK
7. a) If a Buck, was the total antler length: ☐¹LESS THAN 4 inches ☐²MORE THAN 4 inches
- b) If total antler length is more than 4 inches, how many POINTS ON EACH SIDE?.....

HUNTING DISTRICT

Antler Points

X

(Side 1)(Side 2)

2003 MOUNTAIN LION SIGHTING SURVEY

Interviewers: Please read this introduction if there is a Mountain Lion Sighting label for the individual and if this person hunted DEER this past 2003 hunting season (deer survey question 1 is YES).

Label area

Introduction: FWP is currently conducting a long-term mountain lion research project. As part of that study effort, we are evaluating different methods of monitoring trends in lion abundance. One method we are testing is to survey deer hunters across the state in regards to the number of lions they observe while hunting deer. You can help by answering the following questions.

Interviewers: Fill out this form if this person sighted a mountain lion while hunting DEER this past 2003 hunting season (the answer to question 1 below is YES).

1. Did you see one or more mountain lions while deer hunting during the 2003 hunting season? ☐ YES
2. List up to 4 hunting districts where you sighted lions while hunting deer, the total days you hunted, and the total number of lions that you saw.

Interviewers: The deer hunting district(s) where the respondent sighted the mountain lion(s) should be selected from the hunting districts (and days hunted) you listed on the deer questionnaire (deer questionnaire question 2).

Deer Hunting District Number*				Number Days Hunted for Deer*				Number Lions Observed (1-9)			

* as indicated on deer questionnaire

Special Instructions to Interviewers

Record only reported visual sightings of mountain lions made during the 2003 deer hunting season while hunting deer. Disregard all other responses (observations made during previous years, while hunting other species such as elk, or observations of tracks, scat, etc.).

Hunters who have questions about the survey can be directed to Rich DeSimone (444-0358) or Jeff Herbert (444-3940).

